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MEDICINE IN TRANSITION*

BY

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I propose to begin my address by briefly reviewing the work of our profession during the anxious and exacting years of the war. It will not be possible to do more than outline some of the most outstanding features, but they will serve to show how great this work was and how much this country owes to its medical men and women, and to the profession as a whole.

Medicine During the War

When we speak of war our thoughts by reason of our training dwell first on the casualties, the wounded, and the sick. I will therefore begin by discussing the treatment of the wounded, the proportion that survived, and the extent to which they regained their full capacity. The final statistics are not yet published, but we know enough to realize that they will show a remarkable improvement over those of the first world war. Brigadier Philip Wiles,† for instance, has told us that in the M.E.F. during the year April 1, 1942, to March 31, 1943, the over-all mortality rate was only 2.1%, which is less than one-third of the rate in Egypt and Palestine during the previous war. No less striking is the very large proportion of the wounded who recovered completely and were able to return to their units.

These results must be mainly attributed to the work done by our medical scientists on the sulphonamides and allied preparations, and more recently the discovery of the value of penicillin, but important contributing factors were the establishment of the mobile field surgical units and the admirable organization for the collection and disposal of casualties, which enabled the wounded to be treated with so little delay. Perhaps only those who served in the last war and remember the extent and severity of suppuration in the wards, the long and often painful convalescence of so many of the wounded, and the number of amputations that had to be performed, can fully appreciate the change that has taken place. Then again, the science of blood transfusion has made great progress, and due credit must be given to those who by their work in the laboratory and in the field were instrumental in saving many thousands who without this treatment would have had little chance of recovery. Among other surgical triumphs the intensive study of rehabilitation has enabled large numbers to return to a life of full activity who in the last war would have been permanently and often seriously handicapped by their injuries.

If we turn to Medicine we find that in this war, as in the last, preventive inoculation, combined with chlorination of water supplies, almost eliminated typhoid, which was such a scourge in the South African War, when among the relatively small forces employed there were 59,750 cases, with 8,227 deaths. With the help of the sulphonamides the mortality of cerebrospinal meningitis fell from the high proportion of 50–70%, which obtained in the previous war, to 10% in this, and in some outbreaks to as low as 4%. Nor can we forget the triumph over typhus through immunization and the use of D.D.T.

In the early stages of the campaign in South-East Asia tropical diseases took a heavy toll and presented a very serious problem. A special word of praise is due to those who solved it and brought the prevention and control of these diseases to such a high level that they made a great contribution to the success of the campaign. I need only recall the speech of Admiral Lord Louis Mountbatten at the Guildhall on July 10, when he said that to the discomfiture of the Japanese, who had no remedy against these diseases, he deliberately chose unhealthy areas in which to fight. It would be difficult to imagine a greater tribute to the work of the Medical Services.

I have of necessity to omit much that should be mentioned and must pass over much of the valuable work that was done at home by the E.M.S., by the rank and file of the profession, and by the medical officers of health. I cannot, however, omit reference to the Central Medical War Committee and its laborious task of classifying all the doctors on the *Register* and keeping the lists up to date. In addition it undertook the responsible work of making

* A brief address on his election to the Presidency of the Association at the Annual General Meeting on July 24.

† *Lancet*, April 22, 1944.

nominations for the Services with the help of the Committee of Reference and the local Medical War Committees. This was arduous and most difficult, for, while the Committees had to meet the tremendous demands of the Services, they had to keep constantly in mind the needs of the civil population and at the same time to give sympathetic consideration to cases of special hardship. All these things make a worthy record, and the profession may well feel proud of what it has achieved.

The Royal Colleges and the B.M.A.

As we review the last seven or eight years we cannot overlook the close relations that have developed between the Royal Colleges and this Association. Until shortly before the war each pursued its own path; each was concerned almost entirely with its own affairs, and there was no regular channel of communication between them.

In 1938, however, when the Committee of Reference of the Royal Colleges in England, originally appointed in the first Great War, was revived, a move was made to put an end to this isolation. Dr. Anderson, then Secretary of the Association, was invited to serve as liaison officer between this Committee and the Central Medical War Committee, and it was decided to hold meetings in the house of the Association. As the late Chairman of the Committee of Reference, I gratefully acknowledge the courtesy of the Association in providing the accommodation, and its generosity in placing its secretarial department at the disposal of the Committee.

Then in 1940 the Association invited all the Royal Colleges to join with it in reviewing the peacetime organization of the general medical and hospital services, to consider how far they were satisfactory and how they could be made more efficient. After a little negotiation the invitation was accepted and the Medical Planning Commission was formed. This was a historical event. For the first time the various bodies met together in common council to debate matters in which all members of the profession were concerned.

When, therefore, the last Government published its White Paper on a National Health Service the profession was ready and prepared for discussions with the Minister of Health, and the Negotiating Committee arose almost automatically from the Medical Planning Commission.

Lastly, the President and Council of the Royal College of Surgeons invited the Association to send a representative to attend the meetings of the College Council. Dr. Guy Dain was nominated and received a warm welcome.

Critical Days

These are critical days, and this increasing co-operation must give satisfaction to those who look ahead and see the dangers that may arise from State control over the profession in their care of the sick.

The high standard of British Medicine and its prestige are due in no small measure to the freedom the profession has hitherto enjoyed: a freedom unfettered by the trammels, the frustrations, and the infinite delays of bureaucracy, and, above all, a freedom untouched by the ebb and flow of politics.

The care of the sick is an art as well as a science. Medicine is not a plumbing job, nor is it as simple as building houses. Men and women are not robots—they are sentient human beings, varying in their constitution and in their response to different forms of treatment. Each patient is an individual with his own temperament, foibles, likes, and dislikes; each needs sympathetic understanding and encouragement. If we are to maintain our ideals, if we are to continue to regard our patients as individuals and not merely as cases and types of certain forms of disease, if we are to preserve the invaluable confidential relationship between doctor and patient, the freedom of the profession in clinical matters must be preserved. Research must be encouraged in every possible way, but it is to be remembered that money alone cannot bring results, nor have all men the temperament and mental qualities it demands: discoveries are not made to order. Most important is the fact that successful research is a rare and delicate plant which flourishes at its best only in an atmosphere of freedom.

In the uncertain months and years that lie ahead it is vital that the medical profession should be united and able to speak with one voice; otherwise it cannot hope to have the influence that is essential if the interests of the sick are to be safeguarded to the full and the members of the profession are to have proper consideration. Every effort, therefore, must be made to maintain and develop the close relationship that now exists between the Association and the Royal Colleges. Each body has its own province. The Royal Colleges are concerned with the promotion of the art and science of medicine, surgery, obstetrics, and gynaecology, and they are responsible for the growth of their branch of learning both directly and through their Fellows on the councils of the universities. On the other hand, there is much that can be done only by the British Medical Association. It has rendered great services to the profession, and its task has not always been easy. In such a democratic body criticism is of course inevitable; but constructive criticism is always welcome: it is a valuable corrective and strengthens the whole system. The Council must be gratified and encouraged by the rapid increase in the membership of the Association, which has grown from 38,000 in 1938 to 52,000, and now represents some 80% of the profession. It is to be hoped that it will grow even stronger and ultimately include all British medical men and women.

Constant Vigilance

I have drawn attention to the high standard of Medicine in this country and have mentioned some of the great achievements of our medical men and women during the war. Now, however, that Medicine has been dragged into the turbulent sea of politics the future is obscure. Steeped as we have been in the great traditions of our profession since we first entered the wards of our teaching hospitals, some of us may feel that we can afford to smile at the little minds and loud voices that decry us and accuse us of being self-seeking obstructionists. But constant vigilance will be necessary, and for this reason the present happy co-operation between the Association and the Royal Colleges should be permanent and not allowed to lapse when the immediate emergency has passed. It is only by working together, consolidating our profession, and making it as strong as possible that we can protect the sick and maintain the proud position of British Medicine, together with all those things tangible and intangible for which it stands.

PROBLEMS ARISING FROM THE USE OF PENICILLIN IN GONORRHOEA

BY

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Among the problems which have arisen from the penicillin therapy of gonorrhoea are the following: (1) Can the multiple-(five or ten) injection technique used so successfully in the Services be superseded in civilian out-patient practice by a "one-shot" or a "two-shot" method? (2) Does the dosage of penicillin used in the treatment of gonorrhoea "mask" the presence of a concomitantly acquired syphilis, or does it not? (3) Is there any danger that the single-injection method of treatment, if it should fail, will produce a penicillin-fast strain of the gonococcus? (4) Is it advisable to give irrigation when penicillin is used?

Articles that have recently been published show that among those engaged in treating venereal disease there are very decided differences of opinion on these questions. For example, Allan (1946) describes the apparently completely successful use of a single-injection method (dose 200,000 or 300,000 units) in a small group of thirty cases of gonorrhoea, and expresses the hope that "in some clinic dealing with large numbers, and where patients can be under more continuous supervision, the single-injection method will be tried out on enough cases to provide accurate statistics." Allan states that "the single-injection method has several demerits"—for example, "the danger of producing a penicillin-fast strain of the gonococcus" and "the very real danger of masking an early syphilis"—and in this latter connexion he stresses "the necessity for regular serological tests for the following twelve months." On the other hand, Marshall (1946), in commenting on Allan's pronouncements, states that he has "not yet seen any cases where syphilis became evident later than three months after penicillin therapy for gonorrhoea and without another exposure to possible infection." Marshall remarks that "it would be interesting to have . . . reasoned opinions . . . on the length of follow-up necessary after the treatment of gonorrhoea with penicillin in the doses now used."

Various Injection Techniques Compared

The efficacy of multiple-injection techniques in gonorrhoea, either untreated or sulphonamide-resistant, has been emphasized by Harrison (1945), who recommended five 2-hourly doses of 30,000 units, and more recently by Lees (1946), who adduced a cure rate of 98% in 344 sulphonamide-resistant cases treated with ten 3-hourly doses of 10,000 units. Marshall (1945) has stated recently that "the best method of treatment of gonorrhoea with penicillin . . . is with doses of not less than 100,000 units given intramuscularly in four or five separate injections at 2-hourly or 3-hourly intervals over a period of 8–12 hours." On the other hand, from the point of view of civilian practice, multiple-injection techniques have distinct drawbacks, and a "one-shot" or "two-shot" method much more nearly approaches the ideal. But is it practicable by only one or two injections to achieve a cure rate comparable to the high efficiency of the five-injection plan? Romansky and Rittman (1944) have shown that a single dose of 100,000 units could be highly effective when its action was delayed and prolonged by suspending the penicillin in peanut oil containing 2 or 3% of beeswax. Lloyd Jones *et al.* (1946), using suspensions of penicillin containing magnesium sulphate to delay absorption, have described a one-injection method which achieved apparent cure in 95.6% of 113 male out-patients. In the hope of arriving at a satisfactory minimal-injection technique, various methods have been tried in groups of cases at the Edinburgh clinic, and the results recorded are shown in Tables I and II.

Certain cases were considered unsuitable for a one-injection or a two-injection technique, and for these a multiple-injection method was used; these cases fell into one or other of the following groups: those with metastatic complications, such as arthritis and iritis; those with local complications, such as abscess of the prostate gland in the male or abscess of Bartholin's gland in the female; young girls with gonococcal vulvo-vaginitis; and babies with gonococcal ophthalmia. In one of these cases chosen for multiple-injection treatment—that of a little girl of 4 suffering from gonococcal vulvo-vaginitis—the gonococcal infection showed amazing persistence after what constituted a colossal dosage of penicillin even for this resistant type of case. First of all this child was given fifteen 3-hourly intramuscular doses, each of 20,000 units, which resulted in an apparent clearing-up and temporary disappearance of gonococci from the smears. But slight redness and discharge returned and gonococci reappeared in the smears, so another course of twenty-four 3-hourly doses, each of 20,000 units, was administered. Again there was temporary improvement, and thereafter again recurrence. A third course was now given, comprising sixty 3-hourly doses each of 40,000 units, and, after the usual improvement, again relapse occurred. By this time the child had received no fewer than ninety-nine intramuscular injections of penicillin to a total dosage of 3,180,000 units—more than enough to cure most cases of sero-negative primary syphilis in an adult—and still the gonococcus had not been beaten. In pity for the little patient the idea of still more penicillin was abandoned; instead recourse was had to the sulphonamides, and 15 g. of sulphadiazine caused disappearance of signs and gonococci, though the period of observation has not been long enough to justify claiming a cure.

Tables I and II show in comparison the results obtained by one-shot and two-shot techniques.

TABLE I.—*Results of Giving One Single Intramuscular Injection of 200,000 Units*

	Period of Investigation	Nature of Preparation	No. of Cases	No. of Relapses	Cure Rate %
Male cases: Group 1 ..	June, 1945, to Feb., 1946	Saline solution without adrenaline	135	31	77·0
„ 2 ..	July, 1945, to Oct., 1945	Saline solution plus adrenaline	103	20	80·6
„ 3 ..	Nov., 1945, to Dec., 1945	Oil–beeswax suspension	41	4	90·2
Female cases: Group 1 ..	July, 1945, to Jan., 1946	Saline solution without adrenaline	35	4	88·6
„ 2 ..	July, 1945, to Dec., 1945	Saline solution plus adrenaline	58	7	87·9

TABLE II.—*Results from Two Intramuscular Injections, Each of 200,000 Units*

	Period of Investigation	Nature of Preparation	No. of Cases	No. of Relapses	Cure Rate %
Male cases ..	Jan., 1946, to April, 1946	Saline solution	190	8	95·8
Female cases	Jan., 1946, to April, 1946	Saline solution	55	5	90·9

Description of Preparations Used

All solutions of penicillin were made up with sterile normal saline, the usual concentration being 200,000 units of the sodium salt dissolved in 4 or 5 ml. of saline. The beeswax–peanut-oil suspensions contained 2.5 or 3.5% beeswax, and the strength of the suspension was 50,000 units per ml.

In the group of cases in which adrenaline was used to prolong the action of the penicillin by delaying absorption and

excretion, 2 minims of 1 in 1,000 solution of adrenaline hydrochloride were added to and mixed with the penicillin solution in the syringe, the adrenaline being used in an attempt to prolong the bacteriostatic concentration of penicillin in the blood according to the method suggested by Fisk, Foord, and Alles (1945). In the second group of cases, which received two intramuscular injections, the second injection was given six to eight hours after the first. With this scheme it is necessary for the patient to report for treatment twice in the same day. So far it has been possible for every patient to arrange to do this. In the event of a person's reporting for the first time in the evening, for the sake of consistency, and to avoid having to give a second injection in the middle of the night, the first injection might be deferred till the following morning. There is, however, an obvious risk in delaying treatment, and it is, on the whole, probably better in these cases to use a single-shot technique, and repeat it the next morning if smears still show gonococci.

Method of Administration, and Tolerance

All injections were made intramuscularly into the upper outer quadrant of the buttock, and when two injections were given both buttocks were used. As a rule the intramuscular injections were well received by the tissues. Reaction, expressed by pain, swelling, redness, and induration, varied with the make and batch of penicillin used, and was apparently due to impurities, being most evident where the sample was dark brown in colour and of low penicillin content, and very slight with light-yellow samples of greater purity and potency. In most cases the local intolerance was negligible, and, in the few where local pain and stiffness were encountered, these were not of an incapacitating nature.

General intolerance has been minimal, though in a few cases faintness, nausea, pallor, sweating, and rapid feeble pulse occurred after the injection. It is thought that in most instances this was psychological, and due to the prick of the needle rather than to the action of the penicillin solution. The majority of the patients exhibiting these features occurred in the series receiving 2 minims of adrenaline in addition to the penicillin, and in these the untoward effects might have been due to the rapid absorption of the adrenaline. This was a transient phenomenon and passed off quickly without special treatment.

Relapses

A certain number of cases in each series had received previous treatment with sulphonamides and some had been treated with penicillin. Those which had received previous sulphonamide treatment were neither more nor less liable to relapse on the dose of penicillin given than those which had had no previous treatment. In each series 91% of the males had no urethral discharge the second day after treatment. The duration of the discharge depended on the severity of the infection before treatment was instituted; in only 2.4% of the male patients did it persist for more than three days.

All cases which relapsed on the initial dose of penicillin—i.e., where the urethral discharge persisted or returned (usually within 14 days) and was found to contain gonococci—were cured by further treatment with penicillin, usually by one of the methods using multiple injections of saline solution at 3-hourly intervals. A few of these relapse cases were cured by a course of 25 g. of sulphathiazole or sulphadiazine given in five days.

All cases reported have been under observation for at least two weeks after treatment with penicillin. Most of them have been under observation for some months, and several have been observed for six months and discharged as cured.

Concomitant Syphilis

Five of the male patients in the series now reported on, and two additional males, have during their period of observation developed syphilis, and, so far as has been ascertained, infection with *Sp. pallida* took place at the same time as infection with the gonococcus. In these cases the incubation period before the appearance of the chancre has varied from 39 to 184 days. All the patients strongly denied any exposure to infection after having had their gonorrhoea treated with penicillin. The salient features of these seven cases are now detailed.

Reports of Cases

Case 1.—Age 33. Exposure, Dec. 6, 1944; urethral discharge, Dec. 12. Took 12 g. sulphapyridine. Seen on Jan. 10, 1945; gonococci still present in urethral smear. Blood Wassermann negative. Given 30 g. sulphathiazole, after which discharge stopped. Jan. 24: Reported with return of urethral discharge, and gonococci again present in the smears. Given 30 g. sulphadiazine. Feb. 1: No discharge; urine clear. Feb. 15: Recurrence of profuse purulent urethral discharge containing gonococci. Given penicillin in oil–beeswax suspension, 100,000 units. Feb. 16: No discharge; urine clear. Feb. 19: Routine blood tests showed both Wassermann and Kahn to be strongly positive. March 8: Course of sixty 3-hourly injections, each of 40,000 units, of penicillin started. March 9: Quantitative Wassermann titre, 36 doses. March 11: First appearance noted of indurated sore at the urinary meatus and of a scar in the coronal sulcus. The period between exposure and the development of positive blood tests was 75 days; to the appearance of a "sore," 95 days.

Case 2.—Age 23. Exposure, April 14, 1945; urethral discharge, April 19. April 21: Gonococci very numerous in urethral smear. Blood Wassermann and Kahn reaction both negative. Given 25 g. sulphathiazole, followed after an interval by 30 g. May 22: As the discharge containing gonococci still persisted he was given 4 injections of penicillin, each of 15,000 units 3-hourly (total, 60,000 units). May 23: Indurated lesion on under-surface of shaft of penis. Three successive dark-field examinations of serum were negative for *Sp. pallida*. Lesion healed satisfactorily. Blood Wassermann and Kahn negative. July 18: Blood Wassermann weak to moderately strong positive; Kahn strongly positive. Incubation period to development of "sore," 39 days; to positive blood Kahn, 95 days.

Case 3.—Age 30. Exposure, Aug. 16, 1945; urethral discharge, Aug. 22. Seen on Aug. 23. Urethral discharge contained very numerous gonococci. Blood Wassermann and Kahn both negative. Given one dose of penicillin, 200,000 units, plus 2 minims of adrenaline. Sept. 22: Blood Wassermann negative. Oct. 1: Two small circular abrasions in coronal sulcus, not indurated and with no associated inguinal adenitis. Three successive dark-field examinations of serum were negative for *Sp. pallida*. Lesions healed by Oct. 6, and on this date blood Wassermann and Kahn both negative. Oct. 22: Routine blood Wassermann and Kahn strongly positive. Oct. 27: Slightly indurated swelling in coronal sulcus, with no erosion of skin surface. After scarification a small bead of serum was obtained, and in this a few *Sp. pallida* were demonstrated. Quantitative blood Wassermann strongly positive 10 doses; Kahn strongly positive. Incubation period, 72 days.

Case 4.—Age 35. Exposure, Oct. 30, 1945; urethral discharge, Nov. 2. Seen on Nov. 5. Gonococci very numerous in purulent urethral discharge. Blood Wassermann negative. Given one dose of penicillin, 200,000 units. Relapsed. Nov. 9: Given 4 doses of penicillin, each of 40,000 units, 3-hourly (total, 360,000 units). Jan. 3, 1946: Circular indurated lesion on shaft of penis present for one week, serum from which contained *Sp. pallida*. Blood Wassermann negative. Incubation period, 60 days.

Case 5.—Age 39. Exposure Oct. 29, 1945, urethral discharge, Oct. 31. Seen on Nov. 3: numerous gonococci were demonstrated in the purulent urethral discharge. Blood Wassermann and Kahn both negative. Given one dose of penicillin, 200,000 units. Feb. 11, 1946: Erosion on glans penis, in serum from which *Sp. pallida* demonstrated, present for four weeks. Blood Wassermann strongly positive. Incubation period 70 days.

Case 6.—Age 40. Reported on March 8, 1946. Indurated erosion in coronal sulcus present since Feb. 15, serum from which contained *Sp. pallida*. Blood Wassermann strongly positive. Last exposure on Aug. 15, 1945, in Germany. Gonorrhoea treated at that time with penicillin (no record of dosage). Strongly denied any further extramarital exposure. Wife first examined on March 9, 1946. No extramarital coitus; last marital coitus on March 2. Clinical examination negative and both blood Wassermann and Kahn negative. Kept under observation, and last seen on June 1. Blood Wassermann and Kahn tests made on nine further occasions up to that date had proved consistently negative. Incubation period, 184 days.

Case 7.—Age 25. Exposure, last week of December, 1945; urethral discharge, Jan. 1, 1946. Treated with 5 intramuscular injections of penicillin at 2-hourly intervals. Ulcer appeared at root of penis in middle of March. Seen on April 25, when he had florid secondary syphilis. Blood Wassermann strongly positive. Incubation period, 81 days (approximately).

In these seven cases the average incubation period is 82 days, being possibly heightened disproportionately by the phenomenally long period of 184 days recorded for Case 6. After excluding the doubtful No. 2, also No. 6, the average incubation period of the remaining five cases is 70 days, and, if we add to this a further 28 days, which may be

necessary for the serological tests to become positive, it is evident that well over three months may elapse before the syphilis is recognized, provided, as may happen (see Case 2), the dark-field examinations of serum from the "sore" do not demonstrate *Sp. pallida*. This observation, if justified, would seem to have an important bearing on the argument that expectant mothers suffering from gonorrhoea should receive sulphonamide treatment in preference to penicillin in order to guard against the adverse effect on the foetus which might result from the presumed action of penicillin in delaying the recognition of a concomitant syphilis.

Commentary

In so far as the experience set out may help in the solution of the problems enunciated above, the answers provided are:

1. A two-shot technique used on an out-patient basis can provide, in male cases, a cure rate (95.8% in 190 cases) which compares favourably with the efficiency (around 95%) claimed for five- or ten-dose schemes. The two-shot cure rate achieved in 55 female cases was 90.9%.

2. The dosage of penicillin necessary to cure gonorrhoea may apparently prolong the inherently long incubation period of syphilis.

3. There is no evidence that failure of the one-injection or of the two-injection methods of treating gonorrhoea will produce a penicillin-fast strain of the gonococcus.

4. As it is only in a small proportion (2.4% in this series) of penicillin-treated cases that urethral discharge persists after the third day, the practice of giving routine irrigations is not likely to cause a significant increase of efficiency. Cases of gonorrhoea with superadded penicillin-resistant infections must be only a small minority, and, when encountered, it is reasonable to anticipate that some of them may be benefited by irrigations.

Summary and Conclusions

A one-shot or two-shot technique in the treatment of gonorrhoea is more suitable in civilian practice than the multiple-dose methods, and such limited-dose techniques can be conveniently applied to out-patients.

In 190 male and 55 female cases of gonorrhoea a two-injection scheme (2×200,000 units) gave cure rates of 95.8% and 90.9% respectively.

The dosage of penicillin employed to cure a gonorrhoeal infection may apparently delay the development of concomitant syphilis, and therefore penicillin-treated gonorrhoea cases should be observed for at least six months, and possibly longer.

Failure of a limited-dose technique is not likely to produce resistance to penicillin. In the penicillin treatment of gonorrhoea routine irrigation is not necessary, but may be tried if a urethral discharge persists for longer than three days.

The two-dose method advocated, using saline solutions of sodium penicillin, is simple and easily applied, the solutions used requiring no special skill in dispensing beyond the care necessary to ensure sterility and asepsis.

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The Minister of Health, in exercise of his powers under Section 2 of the Water Act, 1945, has appointed the members of the Central Advisory Water Committee. Its terms of reference are to advise the Minister of Health, or any other Minister concerned, upon matters connected with the conservation and use of water resources; on the amendment of enactments which relate to, or in any way affect, the conservation or use of water resources or the provision of water supplies; and on any question that may be referred to the Committee by the Minister in connexion with the operation, or proposed amendment, of relevant enactments. It will also consider the operation of any such enactments, and make recommendations for their extension or modification. Communications concerning the work of the Committee should be sent to the secretary, Mr. M. R. P. Gregson, at the Ministry of Health.

INDIVIDUAL RESISTANCE TO MALIGNANT DISEASE

ILLUSTRATED BY A CASE IN WHICH A METASTATIC DEPOSIT FROM A CARCINOMA OF THE BREAST OCCURRED IN THE APPENDIX AND LED TO PERFORATION AND PERITONITIS

BY

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In general we are liable to think of the human body as capable of mustering only pathetic resistance to malignant disease. It has long been recognized, however, that in certain individuals an extraordinary power of resistance can be shown. Teacher (1908), Pearce Gould (1910), Bashford, Murray, and Cramer (1907), and Schmidt (1903) proved that a varying proportion of metastatic deposits can be strangulated successfully by the natural mechanisms of defence, and probably most cancer cells carried in the blood fail to establish themselves. Unfortunately, in most cases the enemy's reserves seem to be interminable, and in the end a proportion of the secondary deposits succeed in establishing themselves, and, by spreading, finally win the battle and the patient dies.

Histologically, the local defence reaction of the body to malignant disease is manifested by fibrosis and lymphocytic and eosinophil infiltration; it would appear that the body attempts to restrain tumour growth by encapsulation and strangulation. As compared with most normal tissues, malignant tumours require a correspondingly greater supply of nutrient fluid, containing especially glucose and oxygen, because of the rapidity of their growth and their wasteful methods of metabolism. Warburg (1925, 1925–7, 1930) has shown that in most malignant cells glycolysis, or fermentation of glucose to lactic acid, overshadows the normal respiratory process, in which glucose is split into carbon dioxide and water. Thus encapsulation, associated with constriction of the blood vessels supplying the tumour, may succeed in destroying malignant cells in a certain proportion of the foci. Teacher (1908) demonstrated the success of these local defence mechanisms against isolated metastatic deposits of chorion-epithelioma, one of the most actively proliferative of all tumours. He investigated the histological processes of defence in great detail and showed that metastatic deposits of tumour cells became encapsulated by an even more active proliferation of connective-tissue cells, which surrounded, constricted, starved, and finally replaced the tumour. Haemorrhage followed by coagulation, which is a characteristic feature associated with the growth of many of the most malignant nodules, also plays an important part in the destruction of tumour cells. It obstructs the supply routes to peripheral areas by pressure from within and Teacher (1908) believes that it also stimulates the peripheral connective-tissue cells of the host to proliferate and form a fibrous encirclement. Pearce Gould (1910), Bashford, Murray, and Cramer (1907), and Schmidt (1903) have all described cases in which the local success of the defence mechanisms against isolated metastatic deposits has been proved histologically.

In 1939 Atkins made the interesting suggestion that the fibrosis occurring in chronic mastitis is part of the mechanism of defence against the onset of malignant disease. He confirmed the important work of Bloodgood (1932), who followed up a long series of cases for some years and who concluded that the incidence of breast cancer in patients suffering from a chronic mastitis is no greater than in the general population. The various types of chronic mastitis show varying degrees of epithelial and fibrous-tissue proliferation. Such epithelial activity might conceivably progress towards carcinoma if further stimulation occurred. Atkins (1939) says: "If now this fibrosis accompanies epithelial changes, which threaten cancer but rarely fulfil their threat, it is possible that the fibrous tissue may be produced in response to that threat and may play a part in preventing it from coming to fruition. Consequently it would be just those patients who are able to develop a fibrous-tissue reaction to epithelial overgrowth—that is, those who complain of the symptoms of chronic mastitis—who would be unlikely to develop cancer."

We believe that it must be recognized that peculiar individual resistance to malignant disease occurs as well as the more generally recognized individual and organ susceptibility. Unfortunately, patients with this extraordinary resistance to malignant disease are rarely seen, and even they often succumb eventually, perhaps after a lapse of years, to the relentless attack of malignancy.

Case Report

The patient, an unmarried woman aged 40 who worked as a wool-sorter, had had a radical amputation of the left breast 3 years 8 months previously (May 29, 1933). She had been in excellent health until about one month before admission to hospital, but during the last month her appetite had been poor, and she had lost weight and energy and suffered from constipation. Pain in the lower abdomen had started suddenly at 2.30 a.m. on the day of admission (Feb. 10, 1937); in the afternoon of the same day the pain became worse and she vomited two or three times. Later in the evening the pain became even more severe, and she was brought to hospital.

On examination (Feb. 10, 1937, 9.30 p.m.) the patient was flushed and sweating, and her tongue dry and coated. Her temperature was 100.4° F. (38° C.), pulse rate 132, and respirations 36. On the left side of her chest there was a scar such as occurs after a radical amputation of the breast. There were no signs of recurrence locally or in the axillary or supraclavicular glands. The right breast appeared to be normal. The abdomen did not move freely on respiration, and there was rigidity over the lower half. The whole abdomen was tender, but the tenderness was most marked below the umbilicus and especially in the right iliac fossa. On rectal examination there was extreme tenderness in the region of the pouch of Douglas.

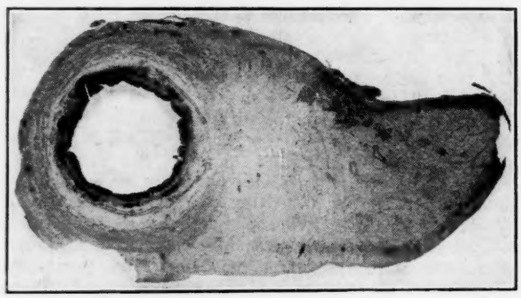

FIG. 1.—Transverse section of appendix and meso-appendix showing a nodule of secondary cancerous infiltration of the meso-appendix near the middle of the upper surface. (× 3.)

Operation.—Under ether anaesthesia the abdomen was opened by a right paramedian incision. There was free pus in the pelvis. The appendix was perforated near its base; its distal extremity was adherent to the right side of the pelvis, and, after mobilization, the appendix was found to be stiff and extraordinarily hard. Both ovaries were enlarged, nodular, and indurated. The appendix, both ovaries, and both Fallopian tubes were removed. A rubber drainage-tube was placed in the pouch of Douglas, and the wound was closed around another (smaller) tube draining the abdominal wall.

Pathological Reports (Prof. M. J. Stewart).—(1) *Left Breast* (May, 1933):—"The tumour is a rather cellular scirrhous carcinoma which is spreading along the ducts. An outlying nodule of growth is involving some adjacent lymphoid tissue, but a separate lymph node shows no invasion." (2) *Appendix with Meso-appendix* (February, 1937):—"Wall greatly thickened. Serous surface shows a fibrinous exudate. At the distal extremity the lumen is dilated and contains frank pus. At one point there is a breach in the serous surface with numerous pale-yellow foci visible in the depths. Histological examination reveals deposits of infiltrating scirrhous carcinoma in the greatly fibrosed and thickened subserous coat." (Figs. 1 and 2.): (3) *Ovaries and Tubes* (February, 1937):—"The ovaries are enlarged and nodular. Their surface is congested and covered with adherent lymph. The Fallopian tubes show congestion of the serous coat, and their lumen is distended with clear fluid. Histological examination reveals infiltration of both ovaries and both tubes with a rather anaplastic carcinoma of scirrhous type which, from the character of the growth, most probably originated in the breast."

Progress.—The patient was severely ill for three days after the operation (February, 1937), but afterwards progress was uneventful, and the abdominal wound healed satisfactorily. An *x*-ray examination of the chest showed no signs of secondary deposits. On March 2 a course of deep *x*-ray therapy was started by Dr. J. M. Lees—200 kV 1 mm. Cu 2500 *r* in four weeks to five pelvic areas. On March 10 the patient was discharged from hospital. In April 750 *r* to five areas was given, making a total of 3250 *r* in two months. On Oct. 27, 1937, the patient had gained 1 st. 2 lb. (7.25 kg.) in weight and was free from symptoms. There had been no menstrual periods since the day after the second operation. She was working and felt "full of energy." Abdominal and rectal examination revealed no abnormality. On March 17, 1938, although the patient appeared to be in excellent general condition and had gained more

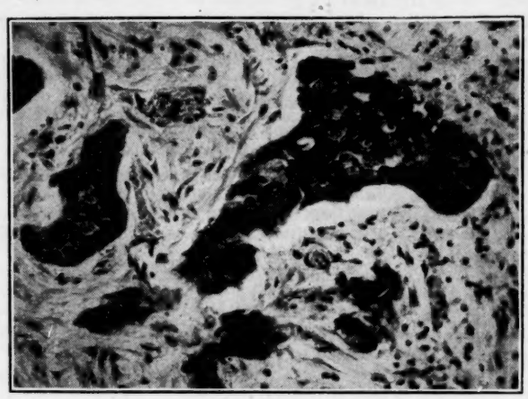

FIG. 2.—High-power view of secondary deposit in meso-appendix showing groups of cancer cells embedded in an abundant fibrous matrix. (× 180.)

weight, physical examination revealed a small red indurated plaque 1/2 in. by 1/4 in. (1.27 cm. by 0.63 cm.) near the centre of the scar on the left side of the chest. As the plaque was movable over the underlying tissues it was excised, under local analgesia, with a circumscribed area of surrounding tissue.

Pathological Report (4) (March 18, 1938; Prof. M. J. Stewart).—"This portion of skin and subcutaneous tissue from the scar of the previous amputation of breast shows extensive infiltration by scirrhous carcinoma." (Fig. 3.)

In May, 1938, deep *x*-ray therapy was given to the left breast area by tangential fields and to the left axillary and supraclavicular regions (200 kV 1 mm. Cu 2400 *r* in 19 days). On May 3, 1939, the patient came to me and asked to have her right breast examined because it had "changed its shape." She was in sound general health, had gained more weight, and had no pain or other worry-

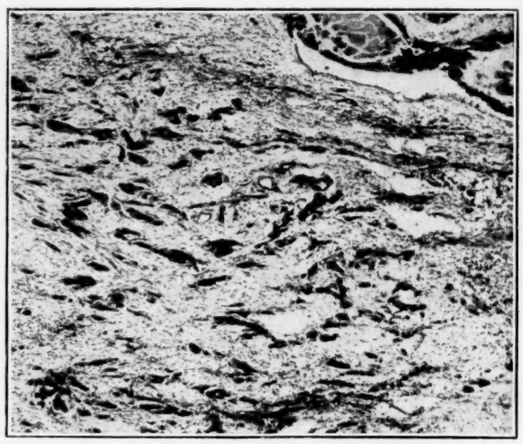

FIG. 3.—Section showing recurrence in scar of left breast. (×40.)

ing symptoms. The nipple on the right side was retracted and there was a small area of peau d'orange surrounding it for a distance of about 2 in. (5 cm.) in all directions. On palpation there was an ill-defined swelling about 4 in. (10 cm.) in diameter occupying the central portion of the breast. The swelling was adherent to the skin but movable over the deeper tissues. The glands in the right axilla were not palpable. No other abnormal physical signs were found on examination of the abdomen and pelvis, and no more nodules were palpable over the site of the left breast. Neither the left axillary nor the supraclavicular glands were enlarged. An *x*-ray examination of the chest revealed no evidence of secondaries.

On May 11, 1939, a radical amputation of the right breast was performed by Rodman's method at the Dewsbury and District Infirmary. The patient went home 16 days after the operation, by which time the wound had healed.

Pathological Report (5) (May 21, 1939; Prof. M. J. Stewart).—"The nipple is completely retracted and slightly crusted on the surface. The substance of the breast is almost completely replaced by carcinomatous tissue, the main mass of which, in the zone beneath the nipple, measures 2¼ in. (5.7 cm.) from above downwards and about 1¼ in (3.2 cm.) in depth. But the tumour tissue also spreads widely into the more remote portions of the breast and includes a nodule in the adipose tissue close to the pectoralis major muscle. There is evidence of cancerous involvement of axillary glands. Histologically the growth is a spheroidal-cell carcinoma, glandular in places and obviously very invasive. It has extended widely throughout the breast and has invaded the skin of the retracted nipple, with wide extension into the cutis vera and subcutaneous tissues of the areola, including the unstriped muscles of the nipple. Lymphatic permeation and invasion of adipose tissue are notable features. The nodule in the adipose tissue close to the pectoralis major muscle proves to be cancerously infiltrated fibrous tissue. Elsewhere in the depths of the breast there are several small cancerously invaded lymph glands and much lymphatic permeation, though without evidence of involvement of the pectoral muscle itself. The ultimate prognosis must be regarded as extremely bad."

In June, 1939, a course of deep *x*-ray therapy was given first to the right breast region (200 kV 1 mm. Cu 2000 *r* in 20 days), and further irradiation was given to the pelvis (200 kV 1 mm. Cu 2000 *r* in two weeks) and to the left breast (200 kV 1 mm. Cu 2000 *r* in two weeks). On Oct. 23, 1939, the patient was going out to work again and felt "perfectly well."

Comment

Whilst abroad I received a letter from her sister-in-law telling me that after a short illness my patient had died in July, 1941. She had insisted upon going to work to within a fortnight of her death.

The patient lived just over eight years from the time of removal of the left breast for a frankly malignant type of cancer. She showed remarkable resistance to the disease even after secondaries had appeared. It is also interesting to note that a second cancer, which was considered to be another primary, started in the opposite breast two years after bilateral oophorectomy had been performed.

Metastatic carcinoma from the breast as a cause of perforation of the appendix and general peritonitis must be extremely rare. No record of a similar case has been found in the literature.

Summary

Some of the natural defence mechanisms against malignant disease are discussed. Certain individuals seem to have exceptional powers of resistance to cancer.

A case is described in which a carcinoma of the left breast was removed before the menopause, and a secondary deposit involving the appendix led to perforation and general peritonitis 3 years and 8 months later. The appendix and both ovaries were removed. A year later a recurrence in the original breast scar was excised. The following year a carcinoma, thought to be a second primary, appeared in the right breast, and a radical amputation was performed. The patient died just over eight years after the original operation upon the left breast.

I wish to express my grateful thanks to Prof. M. J. Stewart for his kind help and advice.

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Nurses and midwives of the Commonwealth and Empire have already raised more than £17,000 as a memorial to their colleagues who fell in the war of 1939–45, and the Queen has shown her appreciation of their effort by consenting to become the Patron of the fund to which they are contributing—the British Empire Nurses War Memorial Fund—and the Princess Royal has consented to become Vice-Patron. The address of the fund is Dorset House, Stamford Street, London, S.E.1.

BILIARY PERITONITIS WITHOUT DEMONSTRABLE PERFORATION

BY

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Biliary peritonitis results from the escape of bile into the peritoneal cavity, which excites a marked peritoneal reaction, whether the liberated bile be infected or sterile. Three main varieties of the condition have been described according to the underlying pathology. Injuries to the biliary tract and perforations of the gall-bladder in acute cholecystitis account for the large majority of cases. A number of cases have been recorded in which no perforation could be found. This so-called "perforationless biliary peritonitis" is a rare condition which was first described in 1905 by Maurice Richardson. No general interest in this pathological entity was evoked, however, until Clairmont and von Haberer published a paper on the subject in 1910.

Symptomatology and Pathology

The clinical picture has shown wide variations, and cases have been described simulating perforation of a peptic ulcer (Illingworth and Dick, 1941), with a less sudden development resembling peritonitis resulting from perforation of the appendix (Buchanan, 1918), or of still more gradual nature, with increasing abdominal distension, vomiting, and a rising pulse rate (Rolleston, 1938).

In the cases with a relatively acute onset, which constitute by far the greatest number, remission of symptoms after the first acute attack has been the one almost constant feature (Cope, 1925–6). This can be explained by the fact that sterile human bile, differing from the bile of experimental animals in its small content of the toxic salt sodium taurocholate, is only slightly irritant after the initial concentrated effusion has been diluted by peritoneal exudate. Further, cases are on record where over 30 pints (17 litres) of bile, presumably diluted by ascitic fluid, have been aspirated from the peritoneal cavity over a period of six weeks.

The pathology would appear to be almost as variable as the symptomatology. While a grossly discoloured and almost necrotic common bile duct associated with a tense red gall-bladder has been described (Buchanan, 1918), the biliary system has also been found apparently intact (Rolleston, 1938). Thirteen out of sixteen cases reviewed by Buchanan (1918) showed inflammatory or carcinomatous lesions of the biliary tract or stones. Of the remaining three, one gave a history of trauma and one was thought to be due to typhoid ulceration.

Pohlmann (1939) describes a case with acute inflammation superimposed upon a chronic cholecystitis. Although the cystic duct was blocked and the tense gall-bladder was covered with fibrinous exudate, no perforation could be found to account for the biliary effusion.

McLaughlin (1942) reports eight cases of biliary peritonitis, but all except one of these fall into a different category, since they were a sequel to cholecystectomy. He suggests that in many such cases the leakage of bile is accounted for by accessory hepatic ducts entering the gall-bladder direct from the liver. Others are almost certainly due to duct perforation resulting from increased pressure in the biliary tree caused by overlooked stones in the common duct. The only case that was not post-operative showed at necropsy a gangrenous gall-bladder with stones in both the gall-bladder and the common duct. No perforation could be demonstrated. Four of the post-operative cases were fatal, and in three on which necropsy was performed stones were found in the common duct. Perforations of the cystic duct stump were found in two.

Smith (1926) reviewed 12 fatal cases, all with rupture of intrahepatic ducts and with a history of calculus, cholecystitis, and intermittent symptoms of common-duct obstruction.

Retroperitoneal extravasation of bile was a characteristic feature in two cases described by Cope (1925–6). In one of these the overlying peritoneum appeared to "weep" bile, but no perforation could be found.

It has been suggested that post-peritoneal rupture or perforation of the common or hepatic ducts results from trauma or ulceration and leads to biliary effusion into the retroperitoneal tissues with subsequent rupture into the peritoneal cavity at a point more or less removed from the site of the perforated bile passage (Buchanan, 1918). This would seem a possible explanation of the two cases with retroperitoneal effusion referred to above.

Glands of Luschka which have penetrated abnormally deeply through the muscular coat of the gall-bladder have been cited as a possible path by which bile may escape, but in view of the very strong safeguard the overlying peritoneum presents against intraperitoneal extravasation this would appear improbable. German authors (Kaufmann, 1929) have blamed percolation and filtration of bile through the wall of the gall-bladder either as a form of diapedesis or as a result of digestion of the wall by pancreatic trypsin.

Ruptures of the intrahepatic bile canal have been found at biopsy, and have all been associated with obstruction to the common duct by stone or carcinoma (Buchanan, 1918). Perforations of a subserous bile duct on the liver surface have also been described.

McLaughlin (1942) remarks that in the majority of recorded cases a small perforation could be demonstrated, though often only by serial sections at the site. Because of their small size these would leak only when the intraperitoneal pressure was increased, closing spontaneously when the pressure was relieved. The natural tendency to spontaneous closure which these organs show is well known, and is attributed in part to the low pressure of bile excretion and the readiness with which adhesions to neighbouring viscera form.

Burckhardt (1923) also believes that there must always be a perforation, either not found or already healed. If this theory be correct at least a temporary obstruction to one of the bile passages must be assumed to promote the escape of considerable quantities of bile through a small opening.

Case Report

A tall well-built man aged 26 was admitted to hospital on May 16, 1945. Five days previously, when walking down the street, he felt a sudden pain in the upper abdomen which lasted probably less than a minute, but caused him to stand still during that time. Two days later he noticed that his urine was dark in colour and he began to suffer from nausea, lack of appetite, and lethargy.

On clinical examination nothing abnormal was detected beyond a yellow tinge in the sclerotics and slight tenderness in the right hypochondrium. Bile pigments were demonstrated in the urine. The leucocyte count was low (5,600), but the differential count showed no abnormality. On the day after admission jaundice was discernible. The van den Bergh reaction was immediate direct. The jaundice continued to deepen, and the patient vomited frequently. He was afebrile throughout and at no time was a raised pulse rate recorded. The patient noticed a change in the colour of his stools, which struck him as being abnormally light in colour, but this information was not obtained till later.

Twelve days after admission, in the early morning, he developed severe pain of very sudden onset, which was first felt between his shoulders posteriorly. He was returning from the lavatory when the pain began, and he found it difficult to straighten his back. A few moments later he felt pain in his abdomen. On examination two hours later he showed the clinical picture of acute general peritonitis, with abolition of abdominal respiration and generalized board-like rigidity. Tenderness was maximal in the right hypochondrium, and the flanks were dull on percussion. Nothing abnormal was detected in the chest.

A diagnosis of acute general peritonitis, possibly due to rupture of the gall-bladder or bile ducts, was made, and it was decided to perform laparotomy immediately. A drip blood transfusion was begun before starting the operation.

Operation.—Pentothal was given through the intravenous tube, supplemented by gas and oxygen. The abdomen was explored through a right upper paramedian incision. The peritoneal cavity was filled with a golden-brown fluid resembling bile, and amounting to about two pints (1.14 litres). In the absence of a sucker this was mopped out with towels. The upper abdominal organs were carefully and systematically examined. The liver appeared slightly congested but showed no gross pathology. The gall-bladder was thickened, suggestive of some chronic inflammation, but the peritoneal covering was healthy and intact, and no stones were palpable. The contained bile was not under tension and emptied easily on pressure. No perforation or other lesion could be found in the cystic duct, the common bile duct, or the common hepatic duct. Both stomach and duodenum were normal. The pancreas was palpated and visually inspected through the lesser sac, and no lesion was found. The spleen was not enlarged. Inflammation of the bowel surface and other signs of acute infective peritonitis were entirely absent.

Some of the peritoneal fluid was collected in a sterile test-tube and was observed to coagulate almost immediately. A pelvic drain was inserted through a suprapubic stab wound. The peritoneum and rectus sheath were approximated with No. 2 twenty-day catgut. Cotton thread was used for ligatures and silkworm-gut for tension sutures and skin.

The drip blood transfusion was continued until two pints (1.14 l.) was given, and this was followed by intravenous saline to ensure adequate fluid and glucose intake until the patient was able to swallow fluids without vomiting.

After-history.—On the day after operation the intravenous drip was discontinued. There was profuse discharge of bile-stained fluid from the suprapubic tube. The peritoneal fluid was reported on as containing bile pigments. (It was sterile after seven days' culture.) The patient's general condition was poor, and his pulse varied from 110 to 130, and his temperature from 101 to 103° F. (38.3 to 39.4° C.). Jaundice was unchanged and bile pigments were still present in the urine. A bad taste in the mouth was a prominent symptom. The next day, much of the oral intake being vomited, an intravenous drip was restarted. The vomit was deeply bile-stained and was strongly positive to Hay's test. The leucocyte count had risen to 12,400. On the fourth day jaundice was noticeably disappearing, and his condition was much improved. The urine was bile-free. The suprapubic tube was removed. The following day the drip was considered no longer necessary. On the seventh day the sutures, which were cutting through the skin, were removed, and the skin edges appeared firmly united. Shortly after, the patient "cleared his throat" and the wound fell apart and bowel protruded. Under pentothal anaesthesia the prolapsed bowel was replaced and the wound edges approximated with through-and-through sutures of stout silk. At this second operation there was still a small quantity of bile-stained peritoneal effusion. There was no sign of the catgut used to close the wound a week previously, nor was there any evidence of inflammation of the bowel wall. This complication resulted in a deterioration in the general condition, and intravenous glucose-saline was restarted, raising the systolic blood pressure from 80 to 120 mm. in the three hours following operation.

With the exception of a collapse of the base of the right lung the patient made steady progress, though there was considerable inflammatory reaction round the wound. A good formed motion of normal colour was passed on the eleventh day after the first operation. Three days later jaundice had almost disappeared.

Bile staining persisted in the discharge from the abdominal wound, and did not entirely disappear until four weeks after the abdominal crisis. Two weeks later a cholecystogram was done and showed deficient filling of the gall-bladder with poor concentration and delay in emptying. No calculi were seen.

Comments

The peritoneal effusion in this case was proved to be bile, from which no organisms could be cultured. The maximum intensity of jaundice coincided approximately with the abdominal crisis, after which both the jaundice and the bile content of the urine began to diminish. The pale colour of his stools attracted the patient's attention for several days before operation, but it was not possible to ascertain whether they were entirely free of bile pigment. The presence of bile in the post-operative vomit excludes the possibility of common-duct obstruction at this stage. A diagnosis of either infective hepatitis or obstructive jaundice is compatible with the history and findings in this case, at least until the advent of an abdominal crisis. Epigastric pain is apparently a not uncommon symptom in the former condition, which was the accepted pre-operative diagnosis. If this was a case of infective hepatitis, however, it is extremely difficult to postulate how the biliary effusion may have occurred. Obstructive jaundice is therefore considered a more likely explanation, being consistent with the symptomatology while at the same time offering a possible explanation of the biliary effusion, and one which is in keeping with the findings of at least a considerable proportion of the reported cases.

It is suggested that at the first attack of pain, before the appearance of jaundice, a small stone passed down from the gall-bladder, which from operative findings and a cholecystogram is known to be pathological, and lodged at or near the ampulla of Vater. This would result in jaundice and increased obstruction in the biliary system. A small perforation possibly occurred in the lower part of the common bile duct, which does

not lend itself to visual inspection. This may have been temporarily plugged with the stone, permitting the escape of bile as soon as it left its site of impaction.

The effusion would in this case be first of all retroperitoneal, accounting for the fact that the initial pain during the abdominal crisis was clearly located to the back. The intraperitoneal effusion would follow a secondary perforation through the peritoneum, as suggested by Buchanan (1918). It will be remembered that Cope (1925–6) described the peritoneum as appearing to "weep" bile.

The obstruction to the biliary system was possibly not released until after the initial escape of bile. After the relief of tension in the common duct the perforation would tend to close spontaneously.

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EPIDEMIC PLEURITIC PAIN

A REVIEW OF 17 CASES IN A MILITARY CAMP, INDIA COMMAND

BY

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During the period December, 1945, to January, 1946, a series of cases presenting themselves as pleurisy occurred in an Indian military camp for British personnel. The clinical picture led us to believe that the usual textbook accounts of dry pleurisy, which emphasize the tuberculous aspect, are unbalanced.

Symptomatology

The cases occurred in young troops arriving in India from England, and were seen in the space of six weeks. Coryza and pharyngitis were common owing to inhalation of dust and to change in climate. Pain in the chest was present in all cases with the exception of two. The men were not ill, and when asked if they would have continued at work in civilian life the majority answered "Yes." More than half reported sick with both pain and upper respiratory tract infection, while others gave a history of the latter during the previous three weeks. The pain was pleuritic in type, mostly localized to the lower thoracic region in the axillary line, and in two cases was felt in the second left intercostal space. It lasted from two to twenty-one days, and the majority of patients had a cough with slight sputum. In some cases there was local tenderness on pressure over the painful area. A pleural rub was heard in three cases, and six showed signs of a parenchymal lesion in the lung. These signs were fleeting, and for the most part consisted of localized crepitations at the site of the pain. They were heard in late inspiration and early expiration, and in one case disappeared after the first few deep breaths. The crepitations persisted after coughing.

It must be emphasized that the physical signs in the chest were transitory. One case presented with pain in the chest and had no physical signs until the sixth day, when crepitations were heard over the site of the pain. Another case had symptoms of pleuritic pain without physical signs over a period of fourteen days; physical signs suggesting a pleural effusion then occurred, but skiagrams showed a parenchymatous lesion of the right lobe—a pneumonitis.

Only four cases were pyrexial, the temperatures ranging from 100.6° F. (38.1° C.) to 103.8° F. (39.9° C.). Of cases transferred to hospital one developed a lung abscess, while another, described above, showed radiological evidence of a pneumonitis. On being screened six others showed no radiological lesion whatsoever. Three patients had the blood sedimentation rate estimated: one was normal, one was 17 mm. (after an hour), and a third showed the series 39–20–9 mm. (after an hour) over a period of three weeks after admission. In no case was the leucocyte count abnormal.

A Typical Case

On Jan. 10, 1946, a youth aged 19 had a brief illness consisting of headache, sore throat, and rhinitis, with a temperature of 103° F. (39.4° C.). Next day there was no pyrexia, and the symptoms resolved. On the fourth day the temperature rose to 102° F. (38.9° C.) without any symptoms other than sweating. Blood slides were negative for malaria parasites. There was no rash or any further pyrexia. This was not a case of dengue fever, but an upper respiratory tract infection.

On Jan. 21 he developed pleuritic pain in the left second intercostal space, with a temperature of 100.6° F. (38.1° C.). There was a slight cough, but no sputum. At the site of the pain crepitations were heard for the first few breaths on deep inspiration. On Jan. 22 the pleuritic pain was less severe, and persistent crepitations were heard in the same position. On Jan. 23 the patient said the pain was felt only in the early morning. Temperature, 99.4° F. (37.4° C.). No signs were present in the chest. There was no further pyrexia and no further pain. The patient is quite well to-day.

Discussion

Access to literature was limited owing to difficulties of travel, and on account of Service conditions observations on the diseases are largely clinical. The cases sent to hospital were followed up there, but once the benign nature of the condition was realized they were treated in bed in the camp hospital for a few days.

The differential diagnosis lies between: (1) a pleurisy of tuberculous origin; (2) epidemic myalgia (Bornholm disease); (3) atypical virus pneumonia; (4) a benign condition such as that described by Williamson (1924) under the name of "epidemic pleurisy."

There are many reasons for not considering the condition a tuberculous process. In no case was there a suggestive personal or family history. With the exception of two, both now well, the condition was benign and recovery rapid; most of these patients were off duty for less than two weeks, and none developed a pleural effusion. Another point against tuberculosis is that a number of cases occurred in a short time among healthy troops—i.e., the condition was epidemic.

Epidemic myalgia, as first described by Daae in 1874, shows points of similarity, but there are differentiating features. Our chief reference is the Cincinnati outbreak of eleven cases. Here a syndrome was described in which the pain in the chest was severe and occurred in paroxysms, sometimes numbering five in all, with periods of quiescence during which the patient was comfortable. The quiescent periods lasted 24 to 30 hours. In our cases the pain was not usually intense, and was of definite pleuritic type; there were no intermissions. Fever of low grade is common to both syndromes. In the Cincinnati outbreak there were no physical signs, and this is our criterion for differentiation; physical signs were present in the majority of our cases, and were fleeting enough to make us think that we should have heard them in more if we had had the opportunity for further observation. We must agree that our cases seem to have taken an epidemic form, since they all occurred in a space of six weeks; and there were other cases in neighbouring camps, all showing the same benign process, migrating to the same hospital. Also, the end of the epidemic was coincident with a considerable fall in the numbers passing through the camp. Local tenderness may occur in both pleurisy and epidemic myalgia. Atypical virus pneumonia is ruled out by the absence of pyrexia in most cases and the fact that the patients were not ill; those in hospital showed no radiological evidence of the affection.

In 1924 Williamson described a condition having an onset resembling "subacute influenza," with pyrexia of short duration followed closely by pain of pleuritic type. In seven of his thirteen cases he detected a pleural rub, but no case developed

an effusion. Pickles, of Aysgarth, also in 1924, described a series of epidemics under the same name; pleural rubs were heard and there was pyrexia, with signs of upper respiratory tract infection. We believe that our cases were examples of the above condition; but data other than clinical evidence are lacking and we have failed to follow up our cases over a long period. Two have been followed, however, for four months; both are healthy men—A1 and capable of carrying out any duties. The nature of the condition appears to be that of a dry pleurisy sharply localized, with a small underlying parenchymal lesion of the lung. It would also seem that it is secondary to an upper respiratory tract infection, which descends either in the air passages or in the lymphatics. In many cases of upper respiratory tract infection which we saw there was thick mucopus in the nasopharynx; and in those cases of pleurisy occurring at the same time as the upper respiratory tract infection it is reasonable to assume that the infection spread down the air passages. In those in which the nasopharyngitis had apparently occurred some time previously the infection had probably persisted and then spread downwards; for we have found that mild infections such as coryza and pharyngitis are persistent in India. The lesion in the lung is superficial enough to give rise to physical signs, but does not penetrate deeply enough to be opaque to *x* rays.

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A CASE OF HUMAN RABIES IN SIERRA LEONE

BY

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This is the first case of human rabies reported in Sierra Leone which has been confirmed by animal inoculation, and is the only case notified during the last eleven years. It is of interest to note that this case was consequent on a cat-bite, and in view of the endemicity of canine rabies in this territory the paucity of reports of human rabies is surprising.

Case History

The patient, a 7-year-old African boy, was brought to the out-patient department of the Connaught Hospital, Freetown, at noon on Jan. 23, 1946, and was admitted to the wards in a restless state. Early on the morning of Jan. 10 a strange cat appeared at the door of the patient's house and was stoned by some of the young inmates, whereupon it hid near a fence in an abandoned cupboard. The patient, the last to come down that morning, went outside to urinate as was his custom and chose a spot near the abandoned cupboard. Whilst he was urinating the cat flew at him and bit him on the upper lip. Another child, seeing his plight, hit the cat, and it returned to hide in the same place. The cat was then stoned to death in its hiding-place, but unfortunately its body was not produced for post-mortem examination.

The bitten child was taken to a hospital near by, where the lip wound was stitched and dressed, after which he was referred to the Connaught Hospital, where the wound was further treated and the first dose of antirabic vaccine given, with instructions that he be brought in the morning to continue the course of prophylactic injections; but this was not done. Four days later (Jan. 14) the bite was nearly well. The child started going to school and remained in apparent good health until the 22nd, on which day he vomited early in the morning. His mother gave him a dose of "worm oil," which purged him, but he was feverish until evening, refusing to eat rice but taking pap. He played that evening and went to bed much improved; but at midnight his skin was hot again, and he was panting, so his mother woke him up; but he said nothing was wrong and slept again. The panting recurred twice or thrice before daybreak, when he complained of pain in the throat and later started retching. By 10 a.m. that day he was so ill that he was brought back to hospital.

Clinical Findings.—On admission at 1 p.m. on Jan. 23 he was seen to be having spasmodic attacks of fear and to be making jerking movements of his arms. The tongue was furred and moist; T. 101° F. (38.3° C.), P. 72, R. 28. There were no appreciable findings in the various systems, and he was able to swallow. A provisional diagnosis of rabies was made, and he was isolated. In view of the history of cat-bite, with only tentative diagnosis of rabies, an intensive course of antirabic vaccine was started; meanwhile a more definite diagnosis was being made. Sedative treatment was also given.

Progress Notes.—At 3.15 p.m. on Jan. 23, the day of admission, the child behaved normally and then had a sudden spasm with generalized twitching, which started with difficult breathing. By 6.10 p.m. the sedative mixture had had no effect, and he was now unable to take anything by mouth, so an intramuscular injection of 4 ml. of paraldehyde was given. At 6.30 p.m. the child was sitting up and showed great fear when offered water; but he was persuaded to take some and immediately jumped about and held his stomach as if in pain. He retched continuously for five minutes and spat a great deal. By 9.15 p.m. he was fairly quiet.

The following day, at 9.30 a.m., he was sitting up. He refused even to look at water, and when it was offered hid his face by turning to the wall. He agreed to take some pap, but eventually refused to touch it. A lumbar puncture was done under general anaesthesia. The cerebrospinal fluid came away clear and not under pressure. At 1.30 p.m. he was sitting up. On being spoken to he held out his right arm and made movements in a slow deliberate manner, protruded a furred tongue on request, and then made a few spasmodic respirations. At 4 p.m. he was restless, made very jerky movements, which recurred at intervals, and was expectorating coffee-brown sputum. Paraldehyde 5 ml. was injected. At 6.30 p.m. the symptoms were restlessness, embarrassment of respiration, and sniffing with markedly dilating nostrils; he was kicking his legs about as if trying to intertwine them. He seemed to be conscious of what was happening. At 7.30 p.m. he was still restless, and there was only a very slight sedative effect from the paraldehyde so far given. At 9.30 p.m. an intramuscular injection of 6 ml. of paraldehyde was given, and at 10 p.m. death occurred.

Post-mortem Findings.—Necropsy was performed on Jan. 25, twelve hours after death. The body was that of a rather poorly nourished African boy of apparently 7 years of age. Rigor mortis was present. There was a recent healed scar on the right side of the mouth, and old scars on the shins. The hands were clenched, and the finger-nails intensely cyanosed; there was less marked cyanosis of the toe-nails. *Thorax:* The heart showed scattered petechial haemorrhages on the visceral pericardium, especially along the auriculo-ventricular groove. The larynx and trachea were normal in appearance; the lungs were rather dry and pale, and filled the chest; there were scattered small subendothelial haemorrhages on the visceral pleura. *Abdomen:* The stomach was empty; the intestines showed no abnormality, and the liver, spleen, and kidneys were markedly congested. *Head:* On opening the skull the dura was bulging; the brain was rather soft; the grey matter was a generalized dark pink; there were small haemorrhages in the floor of the fourth ventricle.

Histological Examinations.—Sections of the brain showed well-marked cuffing of the vessels, with patchy degeneration of the neurons and cellular infiltration among the degenerated cells in the medulla, pons, and basal motor ganglia. The rest of the brain was not affected. No Negri bodies were found. The liver revealed cellular infiltration and some fibrosis around the main bile ducts, artery, and vein. There was black pigment in the Kupffer cells. The kidneys showed cloudy swelling of the tubular epithelium.

Animal Inoculation.—Subdurally, 0.2 ml. of a glycerinated extract of the brain of the child was inoculated into a rabbit. The animal died on the fifteenth day after inoculation. Histological examination of the brain showed a diffuse encephalitis, with marked cuffing of the vessels. Negri bodies were present.

Laboratory Investigations (Jan. 24).—Urine: Reaction acid; a thick cloud of albumin; no sugar; acetone present. *Blood:* Culture sterile; R.B.C., 5.3 million per c.mm.; white cells, 18,600 per c.mm.; Hb, 13.5 g. per 100 ml.; M.C.H., 26 $\gamma\gamma$; M.C.V., 81 c.μ. Differential count: neutrophils, 51%; eosinophils, 2%; small lymphocytes, 30%; large lymphocytes, 9%; large hyalines, 8%. *C.S.F.:* Clear fluid. No clot on standing. Cells, 44 per c.mm. (lymphocytes). Protein, 30 mg. per 100 ml.; chlorides, 770 mg. per 100 ml.

We are indebted to the Honorary Director of Medical Services, Sierra Leone, for permission to publish this paper, and to Mr. W. Quin, Surgical Specialist, for seeing the case and performing a lumbar tap under general anaesthesia.

Revised recommendations of the Nurses' Salaries Committee for the salaries of, among others, matrons, head nurses, qualified sister tutors, night staff, student and pupil assistant nurses, and male and public health nurses are contained in "Nurses S.C. Notes No. 12," which has just been issued (H.M. Stationery Office; 4d. net). The new scales will have effect from Jan. 1, 1946.

AMENORRHOEA AT STANLEY CAMP, HONG KONG, DURING INTERNMENT

BY

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Amenorrhoea is well known to occur as the result of emotional shock, change of environment, and metabolic disturbances, either nutritional or endocrine. A situation in which all these factors may have been operative upon a large number of women, and which gave rise to amenorrhoea in over half of them, is worthy of record.

A month after the fall of Hong Kong on Dec. 25, 1941, British civilian subjects were interned in Stanley Camp. Periodical medical surveys were conducted in order to ascertain the state of health and nutrition of internees. The following is a summary of the menstrual histories which were obtained at the time of the first medical survey of 655 women made in July/August, 1942:

Group 1:	Post-menopause		205
,, 2:	Amenorrhoea of pregnancy and lactation		14
,, 3:	Regular menstruation		152
,, 4:	"Irregular" menstruation, with increased frequency of menstrual periods, and menorrhagia		20
,, 5:	Amenorrhoea:		
	(*a*) Delay up to 60 days	30	264
	(*b*) Delay for over 3 months	234	

Omitting groups 1 and 2, a survey of the remaining 436 women between the ages of 15 and 45 years, who would in normal circumstances be menstruating regularly, reveals that only 34.86% had regular menstruation; 4.59% were irregular, with menorrhagia, and 60.55% had amenorrhoea (53.67% with amenorrhoea for more than three months). Absence of menstruation was a convenience, especially in the early months of internment, and treatment was given only in cases presenting symptoms of discomfort.

Symptoms and Treatment

(*a*) The most constant symptom was excessive gain in weight in the form of flabby unhealthy fat. This was in marked contrast to the majority of women in camp, who lost weight. The patients suffering from excessive gain in weight with amenorrhoea were usually young women, and, although the chief reason for this condition was probably the unaccustomed excessive rice diet, it was considered that thyroid deficiency might also be a factor.

(*b*) In other patients the chief symptoms were nervousness and irritability or depression at the time the period would normally be due, sometimes associated with distension and discomfort in the abdomen. For these it was considered that additional ovarian stimulation might be of use.

Our supplies of drugs were very limited. We had small quantities of thyroid extract and of menformon injections. Group (*a*) were treated with the former and group (*b*) with the latter. Some patients received benefit from the treatment, but, owing to scarcity of drugs and of facilities for investigation, the results were inconclusive.

Length of Period of Amenorrhoea

Of the 234 women with amenorrhoea for more than three months, 81 had restarted menstruating within six months, and all except six had menstruated within 18 months (i.e., by May, 1943), although a number stopped again in the early months of 1944. Six women were known to have had amenorrhoea through the whole period of internment—i.e., 45 months. I have been able to get into touch with two of them since arriving in this country. In one patient menstruation restarted after 48 months without treatment, following a stay on a farm with good fresh food. The second patient was under treatment for three months, and menstruation was re-established after 51 months' amenorrhoea. (This patient had lost her husband in the fighting in Hong Kong on Dec. 25, 1941.)

It is interesting to note that a number of women between the ages of 45 and 50 ceased menstruating in December, 1941, and had amenorrhoea throughout the internment. These cases were considered to be menopausal and are not included in the "amenorrhoea" figures, although they were surprisingly free from any menopausal symptoms other than amenorrhoea.

Possible Causes for Cessation of Menstruation

The *emotional shock* of war and internment, with the change of environment and occupation, was no doubt the initial cause of the amenorrhoea. It is difficult, however, to attribute to this factor alone so long a period of amenorrhoea as a year or more in many cases, although the food factor could not have come into the picture until later; for in most instances amenorrhoea dated from December, 1941, before the effects of undernourishment on general metabolism could have been manifest.

Undernourishment, especially deficiency of proteins (either "first-class" or other proteins); also possibly vitamin deficiency. The protein content of the rations never reached the normal minimum requirement, but it came nearest to this after a Red Cross shipment reached us in November, 1942, containing a large supply of tinned meat. Apart from this welcome addition to our protein, which lasted for about six months, we were about 30 g. per day below the minimum requirement of 75 g. per day, the chief shortage being in animal protein. From December, 1942, to May, 1943, even the most resistant cases of amenorrhoea, with the exception of six, cleared up. Some meat or fish was included in the Japanese rations for the remainder of 1943, but in January, 1944, meat stopped, and did not reappear in the menu until the last eight weeks of our internment. For a few months in 1945 even the fish supply disappeared entirely, and our only proteins were obtained from soya beans and root vegetables. The average value of the rations amounted to about 1,600 calories daily, of which 1,200 were derived from rice. The second "wave" of amenorrhoea started in the early months of 1944, after the meat ration ceased. It may be argued that our poorer Chinese patients who came to gynaecological clinics before the war were not suffering from amenorrhoea, although they were living on a diet similar to ours, but the change in our diet had been sudden both in quality and in quantity.

Summary

In Stanley Internment Camp, Hong Kong, from January, 1942, to September, 1945, 53.67% of the women between the ages of 15 and 45 suffered from amenorrhoea of more than three months' duration.

A few women presenting symptoms of discomfort were treated with the available drugs—namely, thyroid extract and menformon injections.

Within six months 81 women had started menstruating again, and within 18 months menstruation was re-established in all except six cases, which persisted throughout the period of internment.

Possible causes of amenorrhoea are discussed under the headings of (*a*) emotional shock, and (*b*) undernourishment with special reference to protein deficiency.

Medical Memoranda

Delayed Appearance of a Syphilitic Chancre after Penicillin

Because of the curative effect of penicillin on syphilis, it is reasonable to suppose that a small dose may delay the onset of the appearance of a primary syphilitic chancre. It has been shown that the amount of penicillin usually given for cases of gonococcal urethritis is sufficient to destroy surface spirochaetes and lead to the partial or complete healing of a syphilitic chancre.

Walker and Barton (1945), in a review of cases in which a papule had already been noticed, only stress the temporary masking of the primary state, and maintain that all patients should be observed for at least twelve weeks. Cronin (1945) describes ten cases of gonorrhoea treated with penicillin in which syphilis subsequently developed. In his cases the average time interval from penicillin treatment to the appearance of the chancre was 38.9 days, and from the probable date of exposure 47.2 days. He suggests that the incubation period may have been delayed by days rather than weeks, and therefore that surveillance of penicillin-treated cases of gonorrhoea

to exclude syphilis does not require to be extended beyond the customary three months.

The incubation period which elapses between the implantation of the spirochaete and the appearance of a visible lesion is generally under six weeks. An incubation period longer than two months, though described, should be regarded with suspicion. Until recently it has generally been the custom in this country to put cases of gonorrhoea on surveillance for three months. That this may not be long enough is suggested in the case described.

CASE REPORT

A male patient aged 29, who denied previous venereal infection, had reported elsewhere on Jan. 3, 1946, with a gonococcal urethritis. He admitted exposing himself to infection three days previously. Penicillin, 200,000 units given in 3-hourly doses of 25,000 units, quickly cured his gonorrhoea. While on surveillance all tests were negative until he reported to this hospital on April 10. He complained that he had had a sore on his penis for seven days, which was not healing. On examination he was found to have a typical indurated syphilitic sore on the shaft of the penis, with marked inguinal adenitis. Dark-ground examination of material from this sore showed large numbers of treponemata. A Wassermann test on a sample of blood taken at the same time was negative. This finding fits in with the story of the patient that the sore had been present only for seven days. On requestioning he stated that he had run no further risk since Jan. 1, 1946, and was able at the same time to name the prostitute with whom he had taken the risk. I believe his story to be true.

On tracing the record card of the prostitute it was found that she had been treated for gonorrhoea in May, 1945; in the following September she had had salpingitis, but had defaulted since October. She reported again to the clinic on Feb. 25, 1945, with condylomata around the posterior fourchette, in specimens from which *Treponema pallidum* was easily recognized on dark-ground examination. Her blood Wassermann was strongly positive. Gonococci were not found in smear or culture from either urethra or cervix. It can, however, be presumed that she was doubly infectious on Jan. 1, 1946, and therefore the almost certain source of the infection in our male patient.

The case is interesting in suggesting that, as had already been tentatively postulated, the onset of primary syphilis may be considerably delayed after treatment with penicillin. It is to be expected that further cases similar to this will be described.

Cronin's article is useful in showing that a long delaying action is probably not at all common; however, if some cases can occur, three months is too short a period for surveillance of cases of gonorrhoea, since infection with syphilis may pass undetected. This is particularly important in women, when the chancre may not be obvious—e.g., when it is on the cervix.

My thanks are due to Dr. G. L. M. McElligott, Director of the Department, for permission to publish this case.

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Silent Perforation of the Gut Wall

The recent report (*Journal*, March 2, p. 315) of a case of a foreign body piercing the gut wall and causing an "acute abdomen" has prompted me to place on record the following notes, which show that, apparently, silent perforation of the gut wall can occur.

The patient, an intelligent woman of 33, was admitted to this hospital with a typical history, signs, and symptoms of acute appendicitis. An early acutely inflamed appendix was removed, and when arranging the greater omentum to protect the operation site a hard mass was felt in the omentum. On inspection this proved to be a rubber ring embedded in the omentum about 1 in. (2.5 cm.) from the transverse colon. There was some discoloration of the surrounding fat but no evidence of ulceration through the bowel. Resection of a small wedge of omentum containing the ring was performed and the abdomen closed. The patient made an uneventful recovery.

Careful questioning of the patient afterwards failed to bring to light any explanation of the route which the ring must have followed. She had never had any previous stomach trouble such as one would expect when this foreign body was ulcerating through the gut wall. The only explanation which occurs to me is that the ring, presumably ingested, ulcerated through the greater curvature of the stomach between the anterior two layers of the greater omentum, and so was never free in the peritoneal cavity. In this way the absence of symptoms may be explained.

I wish to thank Mr. L. E. C. Norbury, under whose care the patient was admitted, for advice and encouragement in the reporting of this case.

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Reviews

THE COMPOSITION OF FOODS

The Chemical Composition of Foods. By R. A. McCance and E. M. Widdowson. Second edition. (Pp. 156. 6s.) M.R.C. Special Report Series No. 235. London: H.M.S.O. 1946.

Six years ago Prof. McCance and Miss Widdowson published their *Chemical Composition of Foods*, a compilation giving the most important organic and mineral constituents of the more common foodstuffs. The steady demand for this book over the last six years, and the fact that it was reprinted several times, were evidence of its value to workers in the field of nutrition.

The war and its associated nutritional problems created a demand for new analytical data. The composition of cooked dishes altered during the war, partly because of the introduction of 85% extraction flour, dried eggs, and dried skimmed milk, and also because rationing led to the adoption of plainer recipes. This did not necessarily lead to the consumption of less nutritious products. After minor modifications and additions in 1942 a new edition of *Chemical Composition of Foods* became necessary. There has been little change in the form of the volume. Information has been brought up to date and figures on new foodstuffs introduced during and after the war have been added. A special feature of the book is that it gives figures not only for uncooked food but also for the same food prepared by various methods. An interesting table is that on the phytic acid content of foodstuffs. The importance of phytic acid is twofold. Its calcium and magnesium salts being insoluble, they are precipitated in the gut if the food contains much phytic acid, and thus not only are calcium and magnesium salts lost to the body but also the phosphorus in the phytic acid.

Food research is not only technically exacting—some 20 constituents have been estimated for each food, and there are over 600 foodstuffs listed—but it is very laborious. Almost every substance analysed brings up fresh problems, and the solution of these may take weeks or even months. Many Ministry of Food recipes using wartime foodstuffs were prepared and submitted to analysis. The number of man hours that went into the making of McCance and Widdowson's book must be phenomenal. It is indispensable not only to the nutritionist but also to the physician, because a knowledge of the chemical composition of foods is the first essential in the dietetic treatment of disease as well as in research on problems of human nutrition.

INTRODUCTION TO HUMAN ANATOMY

An Introduction to Human Anatomy. By Clyde Marshall, M.D. Revised by Edgar L. Lazier, Ph.D. Third Edition. (Pp. 418; 303 illustrations, 13 in colour. 12s. 6d.) London: W. B. Saunders Company. 1946.

A third edition of Clyde Marshall's book has now been published, the new edition having been enlarged and revised by Prof. E. L. Lazier, of the University of California at Los Angeles, but without any substantial alteration in the general plan of the original work. Certain improvements and differences in the presentation of the subjects have, however, been made, more especially with regard to the description of the joints and ligaments in the chapter on the skeleton, and in the grouping of muscles according to their function rather than the order in which they are usually exposed in a dissection. The description of the circulatory system has also been rearranged on the basis of the principal functions of the system rather than the anatomical relations of the vessels to the surrounding parts. Some new diagrams and figures have been added, or introduced in place of less adequate older figures, more especially in the description of the muscular system and of the optic visual and reflex paths, and the chapter on the endocrine glands, in which recent work on the functions of these organs has been referred to in considerable detail.

The purpose of the book as an introduction to human anatomy, with special stress on the association of structure with function, is thus well fulfilled; a word of warning to

medical students is, however, necessary, for although a knowledge of general principles may be quickly acquired by the study of an elementary textbook, a mastery of the details of human anatomy is essential for both medical and surgical practice; and, however good an introductory textbook may be, such books must be supplemented by the use of the best dissecting manuals, and the study of the classical works on descriptive anatomy and histology.

PATHOLOGY OF THE C.N.S.

Pathology of the Central Nervous System. A Study based upon a Survey of Lesions Found in a Series of Thirty Thousand Autopsies. By Cyril B. Courville, M.D. Second edition, revised and enlarged. (Pp. 450; 208 illustrations. 36s.) California: Pacific Press Publishing Association; London: H. K. Lewis and Co.

The first edition of Prof. Courville's *Pathology of the Central Nervous System* was unusual for three main reasons: it incorporated the results of observation of an enormous mass of pathological material in one centre, it depended to an unusual extent upon the author's own researches, and because of this it presented neuropathology as a living, and therefore progressing, process, the dynamics of which may be misunderstood in its final immobile stage. In the second edition the extension of the author's work on cellular pathology has been included, and the serial diagrams of cellular changes, which are a feature of the first chapter, lend meaning to the later and more orthodox illustrations. It is a pity in this respect that Prof. Courville's recent work on the cellular pathology of brain trauma appeared too late for inclusion in the present edition.

There is a very large chapter, of over 70 pages, on trauma, which is of topical importance. This, like other chapters, has numerous diagrams of the mechanism of the disorder, but some of the diagrams of the mechanics of brain injury have been over-simplified for the sake of clarity. Recent experimental work has shown how very complicated may be the results of the most simple head injury.

This edition, like its predecessor, is really a textbook of applied neuropathology for the practising neurologist and neurosurgeon, rather than for the student of neuropathology. It is intended for general study rather than for casual reference. The additions which have been made to the second edition make it as welcome as the first. The material is attractively presented and the illustrations are excellent.

THE LAW OF PHARMACY

A Textbook of Forensic Pharmacy. By Thomas Dewar, Ph.D., B.Pharm., B.Sc., Ph.C., Barrister-at-Law. (Pp. 253. 10s. 6d.) London: Edward Arnold. 1946.

This is a concise but comprehensive textbook of the law relating to the practice of pharmacy. Much of its information is contained in standard textbooks of medical jurisprudence, but not nearly so fully nor systematically. The author's aim has been to present in a single volume all the forensic pharmacy which is ordinarily taught to candidates seeking qualification as pharmacists, and his book is the first we have seen which fulfils this object. Its first part deals with pharmacy, poisons, and dangerous drugs; its second with medicines; and its third with the law governing retail business. It gives in appendices the text of the Poisons List, the schedules to the Poisons Rules, a list of the poisons the subject of monographs in the *British Pharmacopoeia*, a list of the drugs and preparations exempted from the Dangerous Drugs Regulations, the relevant schedules to the National Health Insurance regulations, and a number of examination questions arranged in order of the chapters of the book. Mr. Dewar does not confine himself to examinations, but covers the subject fairly and fully. His first chapter is a complete account of the constitution and functions of the Pharmaceutical Society of Great Britain and its statutory committee. The test of examination requirements has, however, ensured so far as is practicable that nothing important shall have been omitted, and indeed this book should prove a valuable day-to-day guide to every practising pharmacist. It is good value at half a guinea, but the reader may feel moved to ask whether, in a formal didactic reference book, the Shakespearean quotations at the head of each chapter are really necessary.

Notes on Books

A *Laboratory Manual of Anatomy and Physiology*, by NELLIE D. MILLARD and MARY JANE C. SHOWERS, of the Michael Reese Hospital School of Nursing, Chicago, and the Christ Hospital School of Nursing, Cincinnati, indicates a departure from the extent and character of the physiological training which has hitherto been customary in the teaching of nurses. The manual consists of a series of drawings, with directions for 30 practical classes in anatomy and physiology, and each is accompanied by a summary in which questions are asked respecting the day's lesson. The drawings, mostly in outline, are intended to help the students in making a record of the demonstrations. These include the study of the human skeleton and dissection of various animals, such as the frog, cat, guinea-pig, or rabbit, or of parts of animals—e.g., a veal or sheep heart, or a pork kidney. The students work singly, or in pairs, and in the physiological section are expected to "pith" or anaesthetize frogs and, after identifying particular organs and nerves, to study the effects of division or stimulation of nerves, or direct stimulation of limb-muscles or parts of the heart; also the effect of drugs, and observations on segmentation and peristalsis of the intestine. Instructions are given on the estimation of haemoglobin and the coagulation time of blood, and there is also an excellent diagram of a haemocytometer, with directions for making blood-cell counts. The nurse's training in Chicago and Cincinnati thus includes much practical work which has hitherto come only within the scope of advanced medical study and in this country has very properly been considered outside the nursing curriculum. The book is published by W. B. Saunders Company at 5s.

A second edition of *Hydrotherapy*, by RUTH M. LE QUESNE and MARY GRANVILLE (Cassel and Co; 7s. 6d.), is welcome. Primarily intended for students working for the diploma of the Chartered Society of Physiotherapy (formerly the C.S.M.M.G.), it would certainly be advantageous to medical students to remind them of what they see in the somewhat cursory official visit to the neighbouring spa or hydrotherapeutic clinic. After preliminary chapters on the history of the subject, on the physical principles involved and a few physiological implications, short descriptions of the usual methods of hydrological treatment are given. A short chapter on "treatment of some common conditions" may be useful, but has the inevitable defects of such very brief summaries of a complicated subject. Finally there is a not too accurate list of the facilities at British spas. For example, it is stated that several of the springs of Bath are rich in radium emanations, and its waters are chiefly used externally. Actually there is no variation in the water of Bath, so that it is all radioactive, for what that is worth, and it is extensively used internally.

Flying Visit (London: Church Missionary Society; 2s. 6d.) is the record, in the form of a diary, of a remarkable wartime journey through West and East Africa and the Middle East by Dr. H. G. ANDERSON, who travelled 26,000 miles in twenty-four weeks to visit missionary establishments in Nigeria, Kenya, Uganda, Sudan, Egypt, Palestine, and Iran. His observations, necessarily fleeting, are full of interest, especially to those in sympathy with missionary work. The book is illustrated by some excellent photographs, and it includes nine relevant maps.

Preparations and Appliances

A SIMPLE DRIP-FEED TYPE OF ANAESTHETIC APPARATUS

Dr. RALPH BIBBINGS writes from Princess Elizabeth Orthopaedic Hospital, Exeter:

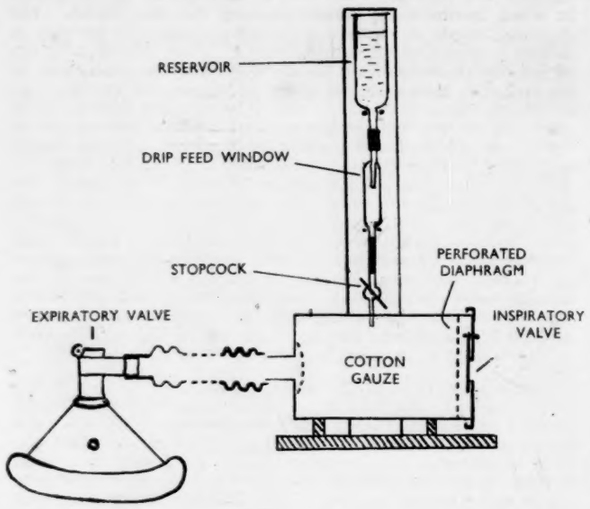
The need for a simple anaesthetic unit, suitable for a wide variety of surgical procedures, is one that arises frequently. The following account describes a simple machine that has been devised at this hospital. Already it has been used in some 250 instances, and the results have been most successful.

Description of the Machine

The apparatus has been so designed that it may be easily constructed on the premises of the average hospital from standard parts. The vaporizer consists essentially of a metal canister with a removable lid. I have found that a small "Kodak" developing tank (about 5 in. long) suits the purpose admirably. The bottom and the lid of the canister are each perforated by a single central hole of about 3/4 in. diameter. Into the aperture in the bottom of the canister is soldered a short length (2 in.) of metal tubing over which one end of a length of "concertina" tubing is fitted. The hole in the lid has, arranged on its inner side, a flap of rubber which occludes it. This flap is attached to the periphery of the lid, being

held there between two washers by means of a screw. Thus a simple inspiratory valve is formed. To prevent the valve from sticking and to ensure an airtight closure, the margin of this aperture should be raised. This may be effected by soldering a sharp-edged metal ring about the hole, or else the hole may be made by punching it from the outside instead of being drilled.

Into one side of the can is soldered a small metal tap. In my own model a most satisfactory one was obtained from the local gas company. The vaporizer is now set up as shown in the diagram.



It is mounted on a wooden stand which carries a short upright to which are wired a small glass reservoir and a drip feed window. These are connected by short lengths of rubber tubing. The inside of the canister is now packed with cotton gauze, just so tightly as not to form any appreciable obstruction to respiration. The face-piece, into which the other end of the delivery tube is plugged, is fitted with a standard expiratory valve. Both apertures in the canister are separated from the gauze by perforated zinc diaphragms. These are to prevent cotton gauze from being sucked into the delivery tube and also to prevent the rubber flap valve being fouled by the gauze. The machine is now complete and ready for use.

Action.—The principle of the machine may be gathered from a study of the diagram. Liquid anaesthetic is placed in the reservoir, whence it is delivered to the vaporizer at a controlled rate, the latter being determined by the opening of the stopcock. In the vaporizer, through which air destined for inspiration is caused to pass, the anaesthetic is adsorbed on to a fine gauze mesh. Hence a small quantity of anaesthetic is split up so as to present a relatively large surface area to the incoming air. On expiration, the valve openings are reversed, air escaping through the face-piece valve. This arrangement provides for a high degree of vaporization.

Methods of Use

The apparatus may be used for the administration of either trichlorethylene or ether.

Trichlorethylene may be used for producing either analgesia or anaesthesia. For induction purposes, the mask is closely applied to the patient's face so as to ensure a gas-tight fit, the patient meanwhile being instructed to continue breathing quietly. As there is no appreciable obstruction to respiration, no particular effort is required of the patient. Hence one may pause for a few moments at this stage, for by so doing the patient is enabled to realize that he can breathe without embarrassment, while at the same time a few words of explanation serve to reinforce his confidence. With the patient now at ease and breathing comfortably, the stopcock is opened a trifle, to allow a delivery of some 30 drops a minute. This is of course an average rate for induction purposes. Naturally, it tends to vary with the type of patient, the extent of the premedication, etc. In the robust type, one may require more, but an increase beyond this rate should be made with caution. In most cases it pays to be patient, provided that the airway is good and that breathing is of satisfactory rate and depth. The aim should be to deliver fluid at such a rate that a *steadily* rising concentration of vapour is produced. It is expedient therefore to avoid trying to hurry a patient by douching, while on the other hand too slow a rate only prolongs the induction unnecessarily. The patient should be aware only of the *smell* of the anaesthetic. He should never be sensible to its pungency. When the desired level of anaesthesia has been attained, the delivery may be suitably reduced. The depth is surprisingly and rapidly sensitive to small variations in the rate of flow. In general, I have found that the longer the operating period the more the delivery rate can be reduced. In a robust man, for example, after the first half hour or so, 10–20 drops a minute is usually sufficient for maintenance purposes. The usual precautions must of course be taken in using trichlorethylene. Hence, one must avoid trying to "push" the drug in the hope of obtaining a lower level of anaesthesia. Should that become necessary then the reservoir should be emptied and replaced by ether.

With ether the same methods apply, except that the rate at which ether must be delivered is considerably greater than that required for trichlorethylene. About 90–120 drops are necessary during the induction period, with a maintenance rate of perhaps 50–70 drops a minute.

In general, the machine is more suitable for use with trichlorethylene than with ether, on account of the greater latent heat of vaporization of the latter. However, in spite of this, the results with ether have been very promising. Despite the fact of there being no water jacket, the degree of cooling that takes place brings about but a slight condensation on the outer surface of the canister, even with the delivery rate up to 120.

Types of Operation

There would appear to be few operations for which the apparatus could not be used. So far, its use has been confined to the several types of operation employed in orthopaedic surgery. Fortunately, for trial purposes, this has provided a relatively wide field. Thus the machine has been found effective and useful in obtaining suitable anaesthesia for repair and reconstructive work necessitating the mobilization of muscle and tendon. For incisions and drainage of osteomyelitic cavities, and manipulative surgery in children, the type of anaesthesia obtained has been found exceedingly smooth and uneventful. In the longer operating periods demanded by peripheral nerve surgery, anaesthesia has presented several problems which have been solved through the use of the apparatus. I have found that induction with sufficient intravenous barbiturate to carry the patient into the third stage, followed by trichlorethylene, is the anaesthesia of choice in these cases. The absence of such distractions as the hissing of valves, or the noise made during the changing of cylinders, is a very considerable advantage and one that is much appreciated by the surgeon in operations of long duration. In addition, the machine has been found especially convenient for obtaining analgesia for painful dressings, the removal of packs, drains, etc. Such procedures are often carried out in ward dressing-rooms. In such cases the small and easily transportable machine can be readily available.

Advantages.—(1) Ease of construction. The machine is assembled mainly from standard hospital accessories. (2) Portability. The whole unit, when packed into a small suitcase, weighs only a pound or two. (3) High degree of anaesthesia obtainable. (4) Pleasant induction. (5) Economy. The amounts used are not at all excessive. In established anaesthesia the consumption is at the rate of 10 dr. of ether, or about 4–6 dr. of trichlorethylene, per hour. (6) Remote control. The only control, the stopcock, is situated at a distance from the patient. (7) Silent action. (8) Adaptability to any head position. (9) Incidence of post-operative vomiting is low. After trichlorethylene it is a rare event. (10) No complicated valve for rebreathing mechanism. (11) No hot-water jacket, chemicals, etc. (12) No resistance to respiration. (13) No appreciable increase in dead space. (14) The exact amount of anaesthetic used is known.

Disadvantages.—(1) The exact percentage of anaesthetic vapour is unknown. (2) Inability to reduce vaporization instantaneously: hence the necessity for care being taken against admitting an excessive quantity to the vaporizer.

I wish to express my thanks to Mr. Norman Capener, F.R.C.S., for his encouragement and the interest he has shown during the development of the apparatus.

"BENADRYL"

Parke, Davis and Co. are now supplying capsules containing 50 mg. "benadryl," which is a substance having the property of neutralizing the action of histamine in many directions, and which is therefore recommended for the relief of allergic symptoms. It has a spasmolytic action also, which is not surprising in view of the similarity of its chemical structure to that of other spasmolytic substances. Its chemical name is β-dimethylaminoethyl benzhydryl ether hydrochloride. Benadryl is to be taken four times daily by patients with acute or chronic urticaria and by those with hay fever. It is also of use in drug sensitization. The clinical reports are very promising.

Hanovia Ltd., of Slough, Bucks, have prepared a treatment record card for the use of light clinics and practitioners for systematic recording of actinotherapy applications and results. These cards cost 6s. for 50 and proportionately much less for larger quantities.

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THE REPRESENTATIVES AND THE BILL

The Annual Representative Meeting was held last week at B.M.A. House and completed its business in two and a half days. A report of the proceedings appears in this week's *Supplement*, and at page 168 of the *Journal* we print in full a statement by Dr. H. Guy Dain, the Chairman of the Council, on the National Health Service Bill. The Special Representative Meeting in May coincided with the debate on the Second Reading in the House of Commons, and last week's A.R.M. coincided with the Report Stage and the Third Reading, accounts of which appear in this week's Parliamentary Notes. The dominant theme before the Representative Body was the National Health Service Bill, and the principal variation on this was Dr. Dain's speech. He reminded the Meeting that when they met Mr. Ernest Brown three years ago the Ministry of Health had ideas for a whole-time service. By discussion and negotiation they went some way to agreement both with Mr. Brown and his successor, Mr. Willink, on the disadvantages to the public of a whole-time service. When they succeeded in making contact with Mr. Aneurin Bevan they found that he had practically adopted the framework of the service as left by Mr. Willink, but had added to it the principle of nationalization. It was this that made such an enormous difference to the medical profession. Mr. Bevan had refused to negotiate or to talk on the principles on which the Bill was founded: these were the State ownership of hospitals, the destruction of the goodwill of general practices, the direction of practitioners, and the payment of practitioners, in part at least, by salary. These were the steps by which the Government proposed to take the practitioner under control in a State service. Not one of them was necessary to the efficiency of the service and served no purpose except to carry out Socialist ideals. Dr. Dain considered that neither voluntary nor local authority hospitals had fully understood the position of national ownership of hospitals. There would be no possibility of practice by consultants and specialists outside the new service, for they could not practise without access to beds, and all beds would be under control of the Minister, the owner of all the hospitals. "Thus an important section of our profession will become, for practical purposes, servants of the State almost immediately, and their opportunities for independent practice will be infinitesimal." Dr. Dain reminded the Meeting that when they discussed the compensation figure with the Minister they clearly stated that this was not to mean that they admitted the principle of forfeiture of goodwill. They had maintained that the general practitioner in a national service should be employed by and responsible to the patient; they were, therefore, opposed to payment by any form of salary, which meant the transference of the practitioner's responsibility from the patient to the person who paid the bill. The Minister had appreciated that the principle of free choice by patients would be interfered with by a salaried service. Dr. Dain observed that the Bill contained many excellent points, but on the Report Stage the Minister had not conceded the right of every practitioner to come into the Service if he wished—a right conceded to the profession in 1911. "Nor has he conceded, what we should certainly require, the right of appeal from a decision of the Minister which would take the doctor out of the Service." In the progress of the Bill through the House of Commons the Minister had maintained the complete right to do everything himself. "He is the complete and uncontrolled dictator." The Minister was to determine every committee and council set up under the Act and even have the power to elect the chairmen of those various bodies. This meant that the appointments would be made on the advice of the Civil Servants—"and we ourselves will be employed by and dictated to by the Civil Servants straightaway, and our freedom in many respects will disappear."

Dr. Dain reminded the R.B. that last May they decided (1) that there should be no direction of medical men, (2) that they were opposed to State ownership of hospitals, (3) that doctors should retain the goodwill of their practices, and (4) they were against any modification of the method of remuneration by capitation fee. "Now we have come to the time when one side or the other has to give way. A conflict is inevitable." Decision would have to be made by each individual member of the profession, and the Council would act on their instructions. The first problem was whether there should be negotiations unless the principles of the profession were conceded. They therefore had it in mind to invite every practitioner on the *Medical Register* to state whether he wished negotiations on the regulations of the Act to take place or whether there should be a refusal to negotiate. The latter would mean a refusal to take part in the Service whatever the form of the regulations. He hoped they could get a straight question put to the profession—"it is up to us to know exactly what is the opinion of the people who have sent representatives to this meeting." It was true they could not foresee the precise form of the Act, which had yet to go through the House of Lords, but it would be an advantage to proceed on the assumption that no very material change was likely. Dr. Dain concluded by referring to the recent broadcast by the Lord President of the Council, Mr. Herbert Morrison, in which he said that the Government was out for planning with liberty and order with freedom. "That," Dr. Dain continued, "is just exactly where we ourselves stand, and if we look at the Lord President's speech concerning the Press a few days later we shall begin to wonder whether on the occasion of that broadcast he was not talking with his tongue in his cheek." In a later contribution to the debate Dr. Dain said that if they went into negotiations in detail they would be giving way on their principles. It was essential to know before very long the attitude of the profession on the question of adherence to the principles.

The discussion which followed the Chairman of Council's statement showed the Meeting's high appreciation

of his able speech and agreement with the main issues raised in it; and also widespread uneasiness over the course of events since the present Government came into office a year ago. One speaker, however, doubted whether any section of the community should flout the law and drew attention to the difficult position in which "the average general practitioner" would be if he refused to work the Act. He claimed that what mattered to the majority of the general practitioners in this country was whether they were going to have a living wage. Another speaker asked whether, as the progress of medicine and the welfare of the patient was the proposed objective of the Government, they could not "play together in the same team." In connexion with one of Dr. Dain's statements Dr. J. A. Brown intervened that he was sure Dr. Dain had no intention of making this a political issue. "Their action had nothing to do with their politics; the only consideration was the health of the nation and the freedom of the profession." Dr. R. G. Gordon remarked that in relation to consultants and specialists Mr. Bevan had tried to split the profession. Many consultants and specialists found his hospitals proposal attractive. Other speakers observed subsequently that many consultants and specialists were already taking part in discussions on the constitution of Regional Boards.

It will be recalled that the Special Representative Meeting last May decided that a referendum of the medical profession should be taken at an appropriate time. After much discussion the following motion was put to the Meeting and carried:

> That a referendum of the whole profession should be taken soon on the simple issue of whether negotiations on regulations with the Minister should take place or not, and that the Meeting recommends to the Council the desirability of the plebiscite including personal contact with each member of the profession as soon as this can be arranged.

It will be noted that the Resolution includes the two words "plebiscite" and "referendum," and doubt as to the exact meaning of these two words was expressed at the Meeting. It may, therefore, be appropriate here to give the relevant definitions from the *Shorter Oxford English Dictionary*: "Referendum" is defined as "The act, practice or principle (chiefly associated with the Swiss Constitution) of submitting the direct decision of a question at issue to the whole body of voters." "Plebiscite" is defined as "A direct vote of the whole of the electors of a state to decide a question of public importance; also by extension, a public expression, with or without binding force, of the wishes or opinion of a community." It seems, therefore, that in the particular matter at issue the extended definition of "plebiscite" is the one which applies. If no serious challenge to the Government is offered by the House of Lords when the Bill passes to it we may expect the present amended Bill to become an Act in the early autumn. The Council of the B.M.A. now has an instruction from the Representative Body to take a plebiscite soon on the question whether or not the medical profession is to enter into negotiations with the Minister of Health on the regulations which will embody the terms and conditions of service in the Government's National Health scheme. Each doctor on the *Medical Register* will have to make up his own mind, and whichever way he casts his vote he will be making a grave decision both for himself and for his colleagues. It is not a decision that can be made by a toss of the coin but only by a fully considered and dispassionate examination of the numerous personal and communal issues raised by Mr. Bevan's Bill. When the collective view of the whole profession is known then the Council of the B.M.A. and the Negotiating Committee will be in an unassailable position in relation to their conduct with the Minister of Health. If the profession decides that negotiations on regulations should be entered into, then it will reserve its decision on whether or not to enter the new Service until the details of the main regulations are known. If it decides not to negotiate on regulations, then a position will be reached in which a prolonged and bitter conflict will be waged between the present Government and a highly important section of the community without whose willing co-operation the Health Service Act will remain a dead letter. The decision, we repeat, rests with the individual members of the profession.

CONSOLIDATION AND UNITY

There has been no Annual Meeting since 1939, and, though once more there was no Annual Meeting this year, there was a touch of ceremony in the introduction of a new President, Sir Hugh Lett, who succeeds a veteran in B.M.A. counsels, Mr. H. S. Souttar, who with the conclusion of his Presidential year completes the remarkable record of having been successively Deputy Chairman and Chairman of the R.B., Chairman of Council, and President of the Association. A demonstration of loyalty to the Association in another form was shown by the presence on the platform of representatives from Australia, South Africa, and New Zealand, and by the short addresses of comradeship and good wishes from representatives from India, Jamaica, Ceylon, Malta, and Assam. In particular we may welcome the desire of South Africa to maintain the friendly links that bind it to the parent body in spite of its formal grouping into a separate identity.

In his brief but cogent Presidential address, which appears in the opening pages of this week's *Journal*, Sir Hugh Lett brought into narrow focus all that our profession has gone through since September 3, 1939. He paid a much-deserved tribute to the research work of medical scientists which has played such a vital part in achieving victory over the enemy, and to the work done on the Home Front by the E.M.S., by the rank-and-file of the profession, by the medical officers of health, and by the Central and Local Medical War Committees. In the short time at his disposal Sir Hugh inevitably had to omit much that he might have said. This lends extra stress to what he has included, and we therefore welcome his thoughtful observations on the relationship between the Royal Colleges and the B.M.A. Sir Hugh recorded that in 1938 Dr. G. C. Anderson, then Secretary of the Association, was invited to serve as liaison officer between the Committee of Reference of the Royal Colleges and the Central Medical War Committee. In 1940 the B.M.A. invited the Royal Colleges to review with it the peacetime organization of the general medical and hospital services and secured their eventual co-operation in the work of the

Medical Planning Commission. This co-operation, along with that of other bodies, continued in the highly important deliberations of the Negotiating Committee, which is still in being and still has important functions to perform. Sir Hugh observed that these are critical days, and the need for co-operation in preserving the unity of the profession will in the coming months be greater than ever. "It is," he concluded, "only by working together, consolidating our profession, and making it as strong as possible that we can protect the sick and maintain the proud position of British Medicine, together with all those things tangible and intangible for which it stands."

FIBRIN FOAM AND FIBRIN FILMS

The fractionation of human plasma proteins, and the chemical and biological properties of its products, have been widely studied by workers in the department of physical chemistry of the Harvard Medical School.[1] A method has been elaborated there for the preparation of human fibrinogen and thrombin on a large scale. On a small scale Dickson Wright collected sheets of fibrin as early as 1940 and used them to line the cavities left after the removal of brain tumours. He described his experiences in a paper entitled "Blood Fibrin as a Styptic" at the twenty-eighth meeting of the Society of British Neurological Surgeons in Oxford on July 19, 1941. Fibrin may now be employed surgically as fibrin foam or as fibrin film, the latter taking the form of sheets, fibres, or seamless tubes. Ferry and Morrison[2] have also described a fibrinogen plastic which can be moulded under the action of heat and which may prove of value in ophthalmology and plastic surgery.

Fibrin foam is a spongy material which becomes an effective absorbable haemostatic when soaked in human thrombin solution. Ingraham and Bailey[3] found it a valuable styptic in cranial surgery. Three bottles contain in sterile form the necessary materials—fibrin foam, dry thrombin, and physiological saline. At the time of operation the saline is added to the thrombin, and strips of fibrin foam, cut to a suitable size and shape, are placed in the resultant thrombin solution, which they rapidly absorb. Gauze is used to press the soaked foam gently against the bleeding brain surface, and the excess of moisture is removed by suction. Larger masses of foam may be needed to fill post-operative cavities, but the clotting process is required only at the interface between fibrin and tissue, and the central portion of such a mass may be removed before closure of the wound. The presence of fibrin during healing provokes virtually no foreign-body reaction and does not increase the size or density of the resultant scar. A large mass of fibrin may aggregate fewer foreign-body giant cells than a single linen suture. In the abdomen it does not stimulate peritoneal adhesions. Bailey, Ingraham, and their co-workers[4] have employed fibrin foam successfully to arrest haemorrhage from the liver bed after cholecystectomy; from the cut surface of the liver after trauma, biopsy, and removal of a tumour; from pancreas or spleen after biopsy of these organs; from the prostatic cavity after prostatectomy; from tooth sockets after dental extractions; and from bleeding surfaces prepared for plastic procedures. It is effective in stopping bleeding from the surface of a lung separated from an adherent chest wall and from the walls of the cavity left after enucleation of a mediastinal tumour. A thin sheet of fibrin foam applied to a bone-end after amputation readily controls haemorrhage from it and reduces the risk of haematoma formation in the stump. It is especially valuable when there is local haemorrhage during operations on haemophiliac patients. Fibrin foam seems to be contra-indicated only in the case of bleeding from the pharynx. An anaesthetized patient may inhale fragments of the material, and these might produce plugging of the bronchi.

Fibrin film, in fine transparent sheets sterilized by glycerol or, more conveniently, by heat, is rather brittle in the dry form in which it is stored, but after immersion in saline for fifteen minutes and manual stretching to twice its original area it develops all the properties of a moist membrane. It has been applied by Ingraham, Bailey, and Cobb[5] as a substitute for dura in 94 cranial operations and has produced no undesirable effects. Stimulating little fibrous tissue reaction, it serves as a neo-membrane to close operative or post-traumatic dural defects without the production of meningo-cerebral adhesions. A piece of film rather larger than the defect to be closed is insinuated under the cut edge of dura. The material has been highly praised for its value in the operative treatment of post-traumatic epilepsy.

Fibrin has also been applied to the repair of divided peripheral nerves. Seddon and Medawar[6] described a method (fibrin suture) of maintaining the apposition of the trimmed nerve-ends by a fibrin clot, provided the gap between the ends was inconsiderable. Singer[7] has elaborated this technique, using 2% fibrinogen as the adhesive material and enclosing the nerve-ends and the fibrinogen in a tube of fibrin film.

1 *J. clin. Invest.*, 1944, **23**, July.
2 Ibid., 1944, **23**, 566.
3 *J. Neurosurg.*, 1944, **1**, 23.
4 *Surgery*, 1945, **18**, 347.

VIBRIONIC FOOD POISONING DUE TO MILK

A very unusual type of food poisoning, affecting the inmates of two institutions in Illinois, is described by Dr. A. J. Levy.[8] The total number of cases was 357, of which 151 were admitted to hospital. The outbreak lasted 13 days. The duration of illness ranged from two days to two weeks, the commonest being 3–5 days. Among the prominent symptoms were fever to between 99 and 102° F. (37.2 and 38.9° C.), diarrhoea, and general prostration; the additional occurrence in many cases of nausea, vomiting, abdominal cramps, general malaise, and aching of the head and limbs suggested a diagnosis of intestinal influenza. Investigation narrowed down the probable cause to the milk supply. There were two sources of milk to the institutions: one, a home-produced pasteurized supply; the other, supposed to be pasteurized but delivered by a dairy that handled both raw and pasteurized milk in identical unlabelled containers. Illness was confined to consumers of the second supply and was probably due to the consumption of raw milk that had been carelessly substituted for pasteurized. As soon as boiling of the milk was introduced the outbreak ceased.

Bacteriological examination of the vomit and faeces of patients failed to reveal any of the usual causes of food poisoning or enteritis, and agglutination tests put up with sera from six convalescent patients against a wide variety of organisms yielded negative results. Smears from the faeces, however, showed the presence of vibrios in 31 out of 73 specimens, sometimes almost in pure culture. Though these organisms could not be grown from the faeces, they were isolated by blood culture from 13 out of 39 patients studied. The organisms resembled cholera vibrios morphologically but differed from them in other respects. They

5 *J. Amer. med. Ass.*, 1945, **128**, 1088.
6 *Lancet*, 1942, **2**, 87.
7 *J. Neurosurg.*, 1945, **2**, 102.
8 *Yale J. biol. Med.*, 1946, **18**, 243.

grew in tryptose phosphate beef broth but not on any solid medium till after 30 subcultures, and then only very poorly. No sugars were fermented, and no indole was produced. These characters resemble those of *Vibrio fetus*, an organism isolated by McFadyean and Stockman[9] in 1913 from the uterine exudate of aborting sheep, and even more closely those of *Vibrio jejuni*, an organism described by Jones and Little[10] in 1931 as probably responsible for a diarrhoeal disease of cattle known as winter dysentery or black scours. Injection of rabbits and pigeons intravenously and intramuscularly was without effect; so also was feeding of cultures to kittens. However, intravenous injection of 3 ml. of a broth culture into a dog was followed in 24 hours by severe diarrhoea, which ended fatally; vibrios were seen in the liver and spleen on direct smear. Attempts to probe into the history of the animals on the farm from which the milk was derived were met with opposition on the part of the farmer, so that it was impossible to attribute the infection of the milk to illness among the animals. The circumstantial evidence incriminating the milk was, however, very strong, and the demonstration of vibrios in the patients' faeces and their cultivation from the blood leaves little doubt that these organisms were responsible for the outbreak.

SURGERY OF THE AORTA

Astley Cooper first performed ligation of the aorta in 1817, after much careful thought and animal experiment. Although his patient died after two days, the operation has been successfully performed since on at least two occasions. It has fallen to Crafoord,[11] of Stockholm, whose outstanding contributions to thoracic surgery are already well known, to perform successfully resection of the strictured aorta with restoration of continuity by direct end-to-end anastomosis for the relief of congenital coarctation. In February of this year, at the Royal College of Surgeons, he delivered a simple, even diffident, account of his dramatic operation.

Crafoord had already demonstrated in dogs that provided the blood supply to the brain was maintained (by anastomosis between the carotid and jugular vessels of another dog) the flow of blood to the other organs could remain suspended for as long as 25 minutes without signs of organic damage. On the strength of this, when operating for patent ductus arteriosus, he applied clamps so as to enable him to divide the duct and suture the aorta. In one patient the aorta was shut for 27 minutes, and no ill effect was noticed. In congenital coarctation a free collateral circulation already exists. Crafoord considered, therefore, that in such cases he might with safety keep the aorta closed for a much longer time while resecting the strictured portion. Two suitable patients presented themselves in 1944, a boy of 12 and a man of 27. Thoracotomy was performed to examine the feasibility of resection. In both cases it was found possible to mobilize the aorta, resect the stricture, and approximate two ends of equal size without tension, so as to allow end-to-end anastomosis. Both patients made a good recovery, and up to the present Crafoord has performed this operation nine times with only one death.

In these first two cases the blood-pressure in the upper and lower limbs returned to normal after the operation. This is important, for the main reason for correcting the aortic stricture is to relieve the hypertension in the head and upper limbs, which is the chief cause of death. The abnormality is fairly common. Maud Abbott, in her classical work on congenital heart disease, found 142 instances in 1,000 cases of congenital cardiovascular defects. The average age at death in her series was 32, with extremes of 3 and 92 years. While it is true that occasional cases are seen late in adult life, it is generally accepted that most patients die young. If hypertension is detected in a young adult, aortic coarctation must be thought of, and sought for. In this way the possibility of surgical relief may be held out to more sufferers from the condition. Crafoord is to be congratulated on a brilliant contribution to cardiovascular surgery.

[9] *Report dep. Comm. Epizootic Abortion, Part III*, London, 1913.
[10] *J. exp. Med.*, 1931, **53**, 835, **845**.
[11] *J. Thorac. Surg.*, 1945, **14**, 347

MEDICAL GEOGRAPHY

The relation of climate (and activities correlated with climate) and disease was one of the earliest topics of scientific inquiry; for us, Hippocrates was the pioneer. Medical geography was extensively studied by our great-grandparents and grandparents, but general medical interest in it has rather faded owing to increasing knowledge of biological and biochemical factors of diseases with well-defined geographical distributions. In a thoughtful essay Dr. Richard Upjohn Light[1] points out that geographical problems remain to be solved, that the new knowledge has not diminished their importance but increased our chance of solving them by eliminating, or defining, associated factors. He also notes that in this age, when "No place on earth is more than 60 hours from your airport" is almost a true statement, geographical knowledge of possibilities becomes practically important. The American Geographical Society has long felt the need for organized research in medical geography and organized a conference on its feasibility. This reprint includes an account of the conference, at which various opinions on methods were expressed, although no speaker questioned the importance of such an undertaking. Attention was given to cartographical considerations, especially by Dr. J. K. Wright, whose principal arguments are summarized. This pamphlet should interest many readers, particularly those in the Colonial and fighting Services.

SOYA BEAN: AN INDIAN REPORT

Report on Soya Bean, by the Soya Bean Subcommittee of the Nutritional Advisory Committee, Indian Research Fund Association, has been received from New Delhi in pamphlet form.[2] This report deals with investigations made in Indian laboratories on the nutritional value of the soya bean. The general conclusion drawn from these investigations is that although the bean contains more fat, minerals, vitamins, and available proteins than the native pulses eaten as food, it is not superior to these in growth-promoting qualities. It is superior to rice but inferior to milk in this respect, and it is also deficient in the essential amino-acids—cystine and methionine. In spite of these findings soya bean may prove a better food supplement than pulses for typical Indian diets, which are quantitatively inadequate and consist largely of cereals of poor nutritive value such as rice. The subcommittee initiating the investigations does not advocate the immediate extension of soya-bean production in India to replace native pulses in the diet. It realizes, however, that the bean is of considerable industrial importance in such countries as the United States as a source of fats, margarine, plastics, and cattle food, and that the part it might play in this direction in Indian industry and agriculture is worthy of investigation.

[1] *The Progress of Medical Geography*. By Richard Upjohn Light. A Proposed Atlas of Diseases. Reprinted from the *Geographical Review*, Vol. XXXIV, No. 4, 1944. New York; American Geographical Society, 156th Street, Broadway, New York 32.
[2] Special Report I.R.F.A., No. 13, The Job Press, Cawnpore. (8 annas.)

SOME ASPECTS OF MILITARY OTOLARYNGOLOGY

BY

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Six years of war service as an otologist, of which 4½ years were spent abroad, have afforded ample time and material on which to base a review of some aspects of otolaryngology in the Army and to consider certain features which might be applied to advantage in future peacetime practice. An analysis of this material is being published elsewhere (Lumsden, 1946).

Chronic Suppurative Otitis Media

This has undoubtedly been the outstanding problem with which Army otologists have had to deal. During a period of 15 months (October, 1943, to December, 1944) 59,368 out-patients were seen by otologists in the Middle East; 35,741 were new patients, and 19,314 (54%) of these were aural cases, a large proportion of which suffered from chronic otitis media (figures are not available). During the same period 8,263 ear, nose, and throat cases were admitted to hospital; of these 1,237 (15%) were suffering from this condition. Of all new out-patients attending one general hospital 19.4% were ear, nose, and throat cases.

At the outbreak of war, instructions regarding Army medical categorization in respect of chronic otitis media and deafness were found to be very meagre. In course of time more precise standards were laid down, and it came to be recognized that the correct management of these cases can save many man-power hours and relieve the Medical Services of much unnecessary work. But chronic otitis media apparently continued to be overlooked with great frequency.

While it has to be accepted that in time of war man-power requirements are such that all cases of chronic otitis media cannot be excluded from the Army, very many were found to be unable to stand up to service in the field, where the majority became unfit on account of an acute exacerbation or superadded otitis externa. This conclusion is the outcome of experience of cases from the Western Desert and also from the Syrian campaign, where a considerable part of the force fought over country which bore little or no resemblance to desert. On the other hand, they remained reasonably fit while employed on base duties, where living conditions are more normal and where adequate attention was available. In the Middle East it was eventually agreed that all cases of chronic otitis media should be "weeded out" of combatant units and lines-of-communication troops, that they should be regraded accordingly by an ear-nose-and-throat specialist and recommended for employment which facilitated their attendance for regular treatment at an established E.N.T. treatment centre (see below). Such cases could be up-graded or moved from reach of such facilities only with the written approval of an ear-nose-and-throat specialist; and they were forbidden to swim. In spite of these provisions, it is my opinion that no man with chronic otitis media (or externa) should be required to serve in a hot climate if it can possibly be avoided.

It has been suggested that, in the Army, sufferers from chronic otitis media are prone to make the most of their disability. Such an attitude has been found to be exceptional, and it was an everyday event for men to ask if it was not possible for them to be up-graded.

E.N.T. Treatment Centres

As Collins (1943) has already stated, it was suggested that aural treatment centres should be established in reception stations or medical inspection rooms at the larger base camps in the Middle East. This scheme was adopted, and I was associated with their formation and subsequently paid repeated visits to most of them. A few small items of equipment were supplied, including a forehead mirror. Suitable orderlies (of low medical category whenever possible) were given four to six weeks' intensive training in the ear-nose-and-throat departments of neighbouring hospitals. If considered proficient, they then proceeded to work under the supervision of the medical officer in charge of the camp medical establishment, who maintained a close liaison with an otologist at a near-by hospital, where the cases were seen by him at intervals. The essential factor in the success of the scheme was that these orderlies were not transferred to other duties without exceptional reasons. They were proficient in the use of the forehead mirror, invariably showed keen interest in their work, and the treatment provided was of a high standard. As many as 70 cases have been in daily attendance *by appointment*, so that loss of working time was minimal. Medical officers quickly showed enthusiasm for the scheme, while patients frequently expressed their appreciation. Apart from other considerations, the number of ears which became quiescent or healed was impressive. Banham (1944) has shown what can be done by such measures in the appropriate types of case.

Chronic otitis media becomes a more difficult problem in the Army because, though the life is frequently healthier, living conditions and facilities for management are more difficult and the antisocial character of the complaint is probably more noticeable. The associated deafness must never be ignored when considering this condition.

Chronic Otitis Media in the Civilian Population

The adoption of a similar scheme in the future Health Service is suggested. Such treatment centres, in addition to school clinics, could be incorporated in health centres and factory clinics. *Special training for nurses undertaking this treatment would be a primary essential.*

The fundamental problem, however, remains that of prevention by ensuring adequate treatment of acute otitis media. Compulsory notification might do much to make the general public more "ear conscious."

Traumatic Affections

Accidental as well as battle injuries have formed a most important part of one's work in the Army. Cairns (1945) has drawn attention to the desirability of close collaboration between the neurosurgeon and the maxillo-facial, otorhinological, and ophthalmic surgeons. It is frequently considered that the otolaryngologist has little or no part to play in relation to traumatic affections, and several factors are responsible for this. But in such conditions as, for example, skull fractures involving the ear or paranasal sinuses he is often found to fill an important role (Lumsden and Fleming, 1944; Lumsden, 1945).

Summary

Problems concerning chronic suppurative otitis media in the Army are discussed and a scheme for the management of cases is described.

A similar scheme is suggested for the civilian population.

Attention is redirected to the role of the otolaryngologist in relation to traumatic affections.

I wish to acknowledge my indebtedness to Brig. Myles L. Formby, formerly Consulting Oto-rhino-laryngologist to the Army; Major-Gen. P. H. Mitchiner, C.B., C.B.E., T.D., Consulting Surgeon to M.E.F.; Major-Gen. W. C. Hartgill, O.B.E., *M.C.*, formerly D.M.S., M.E.F.; and Major-Gen. J. C. A. Dowse, C.B.E., *M.C.*, D.M.S., M.E.F.

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The Minister of Labour and National Service has given notice in the *London* and *Edinburgh Gazettes* that he proposes to make Special Regulations, regulating certain processes in the manufacture or decoration of pottery. The proposed Regulations would supplement the provisions of the existing Pottery Regulations, and in particular would prohibit the use of glazes other than "leadless" or "low solubility" glazes and restrict the use of ground or powdered flint or quartz in factories where the manufacture or decoration of pottery is carried on. They take the place of the previous draft Pottery (Health) Special Regulations published in February last, to which certain objections were made. The revised draft contains amendments designed to meet some of these objections, particularly in regard to the use of the process known as "dry mixing."

NATIONAL HEALTH SERVICE BILL

STATEMENT BY DR. H. GUY DAIN, CHAIRMAN OF COUNCIL

In view of its importance, we print below in full the statement made by the Chairman of Council in the debate on the National Health Service Bill at the Annual Representative Meeting last week.

The discussion on this is reported in the Supplement.

Yesterday I moved the adoption of the preliminary sections of the Annual Report of Council, but I reserved until this morning any reference to the National Health Service Bill. I did this for the particular reason that before we discussed items in detail we should devote a little time to the consideration of the position as it is developing. The Bill has passed through its committee stage and report stage, and is due for third reading on Friday next. During these various stages we have seen minor modifications in its structure, but nothing to change the main principles on which it is based. It would be desirable to look at the way in which the Bill has emerged from these discussions. If we go back to our experience of three years ago, when we met Mr. Ernest Brown, we found that the Ministry had ideas for a whole-time service. By argument and negotiations and pointing out the disadvantages to the public of such a service we did get a certain way towards agreement both with Mr. Brown and with his successor, Mr. Willink. Then we had a General Election in July of last year and a new Government whose policy is nationalization.

The Government has proceeded to implement its idea in a number of forms. With regard to the Health Service, for a long time the Minister did not talk to us on that subject because he was busy with housing, and when we did eventually come into contact with him we found that he had practically adopted the framework of the Service as left by Mr. Willink and had added to it the principle of nationalization, which makes such an enormous difference to us. He has refused to negotiate, he has been willing to talk on anything else, but not on the principles on which the Bill is founded.

The principles that are introduced in the Bill are the State ownership of hospitals, the destruction of the goodwill of general practices, the determination to direct practitioners where they shall not go and prevent them from moving without permission, and their remuneration, in part at least, by salary. These are the steps by which it is proposed by the Government that the medical practitioner shall be taken under control in a State Service. None of those additions to the scheme will in any way improve the service to the patient. (Applause.) There is not one of them that is necessary to the efficiency of the Service. They serve no purpose except to carry out Socialist ideals. We should look closely to-day at the effects of those proposals. The first and perhaps the most obvious is the ownership of hospitals. Hospitals have not contested this matter in the way in which I should have thought they would be certain to do. On the part of neither local authority hospitals nor voluntary hospitals has there been a real understanding of the position. The first effect, so far as we are concerned, is that there can be no possibility of practice by consultants and specialists outside the new Service. The Minister will own all the hospitals. No consultant or specialist can practise without access to beds, but beds, both public and private, will be under the control of the Minister, who may at any moment decide whether they shall in fact continue to be public or private. Thus an important section of our profession will, for practical purposes, become servants of the State almost immediately, and their opportunities for independent practice will be infinitesimal.

As to the general practitioner, there are three respects in which he will be brought under control. He is not to be allowed to buy or sell practices—that is to say, he loses the goodwill of his practice and the power to transfer his practice when he wishes to leave the neighbourhood or to retire. The Minister says that he is prepared to compensate for the loss of such goodwill, and he has fixed a sum of £66 millions as being the value of the practices for compensation purposes. When we discussed that figure with him we made the specific statement that we were not in any way implicated in the principle of forfeiture of goodwill. The Minister demanded these powers in order that he might be able to distribute practitioners. Sometimes the Minister's powers in this respect are discussed rather lightly. It is said that there is no active direction, and that the practitioner entering practice or desiring to change his area is merely told where he may not go. For this purpose he has to get the consent of two Committees and a central body. I would only remind you that this is an "easy" commencement of control. ("Hear, hear.")

We have said that the general practitioner in a national service should be employed by and responsible to the patient, and we are opposed to payment by any form of salary which means the transference of the practitioner's responsibility from the patient to the person who pays the bill. The Minister has appreciated that the principle of free choice by patients—a public matter in which he could not afford to offend—would be interfered with by a salaried service. He is not, therefore, proposing the distribution of patients, but he does propose to pay doctors in a certain proportion by salary, so that he will have a new form of control over the general practitioner. He has said that he does not think the medical profession are ripe to become salaried officers of the State or civil servants. I hope we are not. (Applause.)

We agree that many points in the Bill are excellent. Indeed, we had a part in fashioning them. But it will be seen that on the Report Stage the Minister has not conceded the right of every practitioner to come into the Service if he wishes—a right which was conceded to our predecessors in 1911 in the case of national health insurance. Nor has he conceded, what we should certainly require, the right of appeal from a decision of the Minister which would take the doctor out of the Service. (Applause.) We cannot possibly agree to a national Service covering all people and all doctors in which the last word as to whether a man may practise in the Service or—what amounts to the same thing—in his profession, will lie with the Minister of Health. (Loud applause.) Whatever else we may or may not do, I hope there will be no question as to our determination on that point.

It is interesting to see that in the progress of this Bill through the House of Commons the Minister has maintained the complete right to do everything himself. He is the complete and uncontrolled dictator. He will determine the constitution of every committee and council that is to be set up under the Act. He has not even allowed to escape from his power the election of the chairmen of those various bodies. It is allowed to none of them to have the sense, wisdom, or the opportunity to elect their own chairmen. Is it wise that we should let ourselves into a Service on those terms? (Loud cries of "No.") The Minister says that if he can do it all himself it will retain flexibility in the Service, and he opposes changes which will limit his powers in appointing committees or their chairmen and so put him into a "strait-jacket." But how can he know all the committees of the country and all the people who should be chairmen of them? Surely it is an indefensible position for a Minister to take, and I hope we shall not agree to it, because what it means is that appointments will be made on the advice of the civil servants, and we ourselves will be employed by and dictated to by the civil servants straightaway and our freedom in many respects will disappear.

We said, before the Bill itself appeared, that we considered that the Service should be built up on certain principles. We have laid down principles which establish the freedom of the public and of the profession. The Minister, of course, has the opportunity of hearing the sort of things that we say in public at meetings like this and at meetings in the areas, and his reply is that these doctors are delightful people, excellent at their job, but that when it comes to the field of organization and medical politics they are just foolish, putting forward principles and laying down opinions which are airy nonsense.

That is the position in which we stand with the Minister at this moment. We have adopted our principles, and what I have said is a fair statement of the value which the Minister attaches to them.

In May last we had a special meeting of this Body, and that meeting did four things: (1) it decided that there should be no control over doctors with regard to the areas in which they practise; (2) it decided against State ownership of

hospitals; (3) it decided that doctors ought to retain the goodwill of their practices; and (4) it was against any modification of the method of remuneration by capitation fee. The voting on each of these four points was as follows: 214 to 2, 210 to 29, 229 to 12, and 209 to 8. Those are substantial majorities which represent the opinion of this Body at that date.

Inevitable Conflict

Now we have come to the time when one side or the other has to give way. A conflict is inevitable. (Applause.) If the Minister had the wisdom of the Government of South Africa and had called us into consultation as to the form which the new arrangement should take and had invited us to approve of it before it went to the House of Commons, we should find ourselves in a very different position to-day. If the Government of one of our Dominions can show that amount of sense, it is a pity that the Government of the mother country cannot do the same. (Applause.) This is the time when we have to decide what action we shall take and at what stage we shall take it. Do we stand by the decisions this meeting made in May? (Loud cries of "Yes.") What will this entail? The decisions that were made in May were an instruction by this Body to the Council, and the Council has no authority to modify or alter them in any way until this Body itself alters them. It is impossible for the Council or its representatives on the Negotiating Committee, therefore, to have any part in the preparation of regulations until the Representative Body gives them a definite authority.

The question has already arisen on the application of the Insurance Acts Committee for an increase in the capitation fee to insurance practitioners. They were met by the Minister himself with a statement that that matter could not be separated from the terms of service under the forthcoming Act, and he was not prepared to discuss the insurance capitation fee until the other matter had been discussed as well. He was thereupon told that the Representative Body was against any form of basic salary. He himself has stated his adherence to the principle of basic salary for every practitioner, and so we are precluded entirely from discussing terms of service under those conditions. That is the position which has arisen and which will arise more particularly in the next few months.

All this entails a consideration of the value of our statements and of the expressed opinion of the profession in carrying out what has been decided. The Minister has constantly said that we are a divided profession and that this has become largely a political question. Some of us are Socialists and some are not. It may be that those who are Socialists will be prepared to accept and work the scheme because it embodies the socialistic principle. But there are others of us who are not Socialists and who think that such a change would be a great disadvantage to the service which the public would get. They are not prepared to join in on those conditions. (Applause.)

Where do we stand? This decision has to be made, not by the medical profession as a body or acting through the Council, but by each individual member of the profession. We have done what we can to make the position understood to the doctors in the various areas, and through the *British Medical Journal* we have endeavoured to keep doctors informed of the situation. But there comes a moment at which the doctors themselves must be asked what action they intend to take. The Council will act on their instructions and not without.

The first problem to arise is whether there should be any further negotiations at all unless the principles are conceded. We have it in mind, towards the autumn, to invite every practitioner on the *Medical Register* to say whether he wishes any negotiations to take place on the matter of regulations and the drawing up of the scheme or whether he wishes us not to take any steps in that regard, it being understood that the latter decision means a refusal to take part in the Service whatever form the regulations may take. We can get a straight question like that across to the profession, and I hope we can get a straight answer, and it is up to us to know exactly what is the opinion of the people who have sent representatives to this meeting. It is continually put to me that it may be that this Representative Body does not represent the profession. For my own part I am prepared to stand by the decisions of this Body. We are not prepared to believe that the representatives come here and vote for things, as they did last May, for which they have no authority in their constituencies. But the effect of the influence of representatives in their own constituencies must not be lost sight of at the time this vote is taken.

Some have thought that members of the profession may be tempted by the offer of generous terms. I do not want to anticipate what will be told you by the Insurance Acts Committee later in this meeting as to the Minister's proposals concerning the increase in the capitation fee, but if those proposals are an earnest of the terms which are to be offered under the new Service they are certainly not generous. I think there may be some discussion as to the date on which the specific questions should be put and a Special Representative Meeting called. While it is true that we cannot foresee even now the precise form of the Act, which has yet to go through the House of Lords, it would be a great advantage to proceed on the assumption that no very material change is now likely, so that we may get the questions answered earlier. On the other hand, it might be wisest to wait until the Bill is finally passed before the question is put.

Some interesting things have happened recently. I listened to the broadcast a few nights ago by the Lord President of the Council, Mr. Herbert Morrison, when he gave an excellent address on democracy and the ambitions of the present Government. He said two things, however, which I am sure he could not have substantiated. He said that this Government was out for planning with liberty and order with freedom. That is just exactly where we ourselves stand, and if we look at the Lord President's speech concerning the Press a few days later we shall begin to wonder whether on the occasion of that broadcast he was not talking with his tongue in his cheek.

What is our position? The matter is entirely in our own hands. There are no other doctors but the doctors who are qualified. We are in the strongest possible position for ensuring that what we think is best for the public will be carried out. (Loud and long-sustained applause.)

ORDER OF ST. JOHN

The *London Gazette* has announced the following promotions in, and appointments to, the Venerable Order of the Hospital of St. John of Jerusalem:

As Knights: Major A. B. Cardew, M.C., Dr. T. H. Leggett. *As Commanders (Brothers):* Lieut.-Gen. T. O. Thompson, C.B., C.B.E., K.H.P., Lieut.-Cols. R. W. M. Strain and C. G. Booker, Majors J. A. Mackenzie, and J. F. Hamilton, Drs. N. Jennings, N. Manson, W. P. Kennedy, and H. G. Ramsbottom. *As Commander (Sister):* Dr. Margaret E. Douglass. *As Officers (Brothers):* Col. T. D. Inch, C.B.E., M.C., Lieut.-Col. S. Le R. Spicer, Major P. Weiner, R.A.M.C., Capt. R. S. Harper, Surg. Lieut.-Col. H. R. L. Casolani, Cols. J. Revans, M.B.E., and G. R. McRobert, C.I.E., I.M.S., Drs. N. S. B. Vinter, C. S. C. Prance, H. C. M. Williams, O.B.E., H. F. Hollis, K. E. Dowd, C. A. Gauthier, W. Bain, D. J. Nicol, M.C., T. W. A. Gray, S. H. Keshen, C. G. Roberts, L. A. Sigurdson, H. J. Porter, G. E. Dragan, and V. T. Camilleri. *As Officers (Sisters):* Drs. Gladys A. Danby, M.B.E., Gladys E. Wilkinson, Mary Rutledge, Daphne W. Dear, and Cecily Porter, and Miss Muriel J. L. Frazer. *As Associate Officer (Sister):* Major Barbara Stimson, R.A.M.C. *As Serving Brothers:* Col. A. C. Haddow, Lieut.-Col. E. J. Selby, O.B.E., Major A. K. Cosgrave, M.C., V.D., R.A.M.C., Majors J. Holmes, and R. A. P. Gray, Surg. Capt. C. C. Elliott, D.S.C., V.D., Drs. J. W. W. Baillie, G. N. Montgomery, T. M. Murphy, A. B. Davies, L. M. Maybury, W. Adams, G. E. P. Davis, G. E. Mullins, S. L. Smith, P. E. Malloch, V. S. Kaufman, W. A. Sloss, E. R. G. Sheil, N. H. Skelton-Browne, G. N. Clark, D. Glen, J. M. Russell, H. S. Gabb, R. MacL. Thompson, E. M. Finegan, J. D. Gray, H. G. Parker, R. O. Davidson, B. M. Bennett, C. R. de C. Sadler, S. A. Hall, H. H. C. Fuller, J. C. Mead, G. K. MacNaughton, G. E. Kidd, W. R. Wright, J. G. Baldacchino, and G. C. Strathairn, and Messrs. K. G. W. Saunders, K. J. Gilchrist, T. J. Cobbe, and A. M. McMaster. *As Serving Sisters:* Drs. Ellen M. W. Shaw, Lilian I. McDonald, Teresa J. S. Iyer, M.B.E., Margaret M. Howe, and Lucretia H. H. Byrne.

Under the title of the Treacher Collins Prize Essay, the Council of the Ophthalmological Society of the United Kingdom has instituted a prize of £100, to be awarded triennially, for the best essay submitted upon a subject selected by the Council. The prize is open to qualified medical practitioners of any nationality, but the essay must be written in the English language. The subject for the next award is "Nutritional Eye Disease." The closing date for sending in essays for this award is Dec. 31, 1947. They should be submitted to the honorary secretary, Ophthalmological Society of the United Kingdom, 5, Racquet Court, Fleet Street, London, E.C.4, from whom also any further particulars can be obtained. No name should be on any essay, but a distinguishing pseudonym or quotation, which should also be upon a sealed envelope containing the candidate's name and address. This envelope should accompany the essay.

Nova et Vetera

EDINBURGH SURGEONS' HALL

The medical school at Surgeons' Hall, Edinburgh, traces its origin back to 1505 and may thus be said to be the oldest in Great Britain, but in its present form as the School of Medicine of the Royal Colleges of Surgeons and Physicians of Edinburgh it has now celebrated its fiftieth anniversary.

In 1839 James Syme, later Lister's father-in-law, urged that students should be allowed to take a certain number of terms at the extra-mural classes in qualifying for the Edinburgh University degree in medicine. The Senatus Academicus fought the idea but were finally overruled by the House of Lords in 1854. In 1884 the Privy Council was unsuccessfully petitioned to grant the extra-mural school a charter, and Miss Jex-Blake and her friends were on their toes to see that this would have compulsorily admitted women medical students; it was Dr. Peter D. Handyside who admitted women students to his anatomy lectures at Surgeons' Hall in 1870. However, an agreement was reached in 1895 between the extra-mural lecturers and the Royal Colleges setting up a governing body. This enabled the School of Medicine lecturers to receive and hold funds, which was important for the Carnegie Grants.

In 1913 an arrangement was made, further modified in 1917 and 1929, which fused the intra- and extra-mural clinical teaching, though many students at the university still take classes at Surgeons' Hall. More students at the school nowadays study for the triple qualification of the Scottish colleges.

The school's buildings in Nicolson Street are nearly 100 years old. A former student, who died in Australia, left some £50,000 towards the cost of a new building, but the war prevented its construction and the Goodenough Committee were thus able to make critical remarks about the accommodation, although no mention was made of the very excellent equipment in many of the departments.

Last year the school suffered a severe loss in the retirement of Dr. John Orr, lecturer since 1913 and Dean since 1924. His kindly character has left its imprint in the liberal atmosphere of the school, which causes many, particularly older people who are taking up medicine, to choose it. The present Dean is Mr. Norman Kemp, and Dr. Douglas Kerr has been appointed Director of Studies.

LAURENCE DOPSON.

DOCTORS IN THE LAW COURTS IN THE 13th AND 16th CENTURIES

Here is a rough translation of part of the Latin record on the Curia Regis Roll, Trinity Term, 14th year of King John (A.D. 1212), belonging to the County of Cornwall.

Osbert, the doctor, appealed Robert Bernard, who, he said, had spent the Sunday before mid-Lent with him, eating and drinking, and likewise the day after, on which day the said Robert sent to his wife that she should come to him on the following Monday. And on that said day his wife came together with his brother Thomas [who seems to have been in Holy Orders, as he is called Clericus] and two others and all these were with Osbert, eating and drinking, even unto the going down of the sun. And then Robert and the others nefariously and in the peace of the Lord King, took Gunnilda, Osbert's wife, and drew her out of the house and beat her with fists and knees so that they left her nearly dead; and then threw her over the hedge outside the orchard. They then took Osbert himself, drew him out of the house and beat him sorely. The assailants then entered the house and stole goods to the value of XX marks, including 11 gold rings, a silver-mounted cup, and a mazer likewise bound with silver. And this they did wickedly and in the King's peace, and Osbert offered to prove the robbery and the assault against Robert as the Court wished.

Robert, defending himself on the charges of breaking the King's peace, the robbery, felony and beatings, said that it was all a case of hatred and malice; that Osbert held a certain house of his for a term and that, as the term was up, he had entered into possession and made no robbery. He offered the King 3 marks that an inquisition might be held. And Osbert, asked whether he had raised the hue and cry, said that he had not, but had come to court to sue for his writ.

The result of the action does not seem to be recorded. One would suppose that Osbert and Gunnilda, after a day's debauch and a good beating, would be in no condition to raise the hue and cry. As a tail-piece to this story the early Chancery Proceedings (1544–7) record an action brought by Richard West, citizen and barber-surgeon of London, against Henry and Robert Savell, gents., Fellows of Lincoln's Inn, for enticing away his apprentice and for threatening to cut off his ears. Highly arbitrary folk they must have been, those Fellows of Lincoln's Inn. We are glad to think that the legal and surgical professions now located in that spot do not continue such evil practices.

The transcript of the Latin record was sent to me some years ago by my friend the late Mrs. Harvey Bloom.

R. R. J.

THE WOOLNER-DARWIN TUBERCLE

There are two busts of John Hunter in public places in London. The massive, romantic head by Alfred Gilbert, R.A. catches the eye from over the side-door of St. George's Hospital; but the bust in Leicester Square, where John Hunter had his town house, is less well known. It was carved by Thomas Woolner in 1874, the year that the square was opened to the public and in which he was elected R.A. Sir Alfred Webb-Johnson lately pointed out[1] that this bust survived the blitz only to be knocked about by hooligans, and that it ought to be restored; in the same speech he recalled Woolner's other claim to remembrance among medical men. Thomas Woolner had his first success in 1847 when he exhibited his statuette of Puck. It was admired by Tennyson and gained Woolner the friendship of Rossetti, whom he joined in forming the Pre-Raphaelite Brotherhood, for like Rossetti he was both poet and artist. But finding it impossible to make a living, he sailed for the Australian gold-diggings in 1852; the farewell scene inspired Ford Madox Brown's famous and charming picture "The Last of England." In Australia he found portrait-sculpture more profitable than gold-mining, and came back to England two years later. He was a man of intellect and charm and moved in the most cultured society of mid-Victorian London. He set to work to portray the intellectual lions of the day. His bust of Tennyson established his name about 1857 and he later carved a head of Darwin. It was from him that Darwin heard of the tubercle of the auricle, one of the vestigial structures which became a clue in his argument for "the descent of man from pre-existing forms." The story is best told in Darwin's words:

"The celebrated sculptor Mr. Woolner," he wrote in the first chapter of *The Descent of Man*, 1871, page 22, "informs me of one little peculiarity in the external ear, which he has often observed both in men and women, and of which he perceived the full signification. His attention was first called to the subject whilst at work on his figure of Puck, to which he had given pointed ears. He was thus led to examine the ears of various monkeys, and subsequently more carefully those of man. The peculiarity consists in a little blunt point, projecting from the inwardly folded margin or helix. . . . Now the meaning of these projections is not doubtful; but it may be thought that they offer too trifling a character to be worth notice. This thought, however, is as false as it is natural. Every character however slight must be the result of some definite cause; and if it occurs in many individuals deserves consideration. The helix obviously consists of the extreme margin of the ear folded inwards; and this folding appears to be in some manner connected with the whole external ear being permanently pressed backwards. In many monkeys which do not stand high in the order, as baboons and some species of macacus, the upper portion of the ear is slightly pointed and the margin is not at all folded inwards; but if the margin were thus to be folded, a slight point would necessarily project inwards and probably a little outwards. This could actually be observed in a specimen of the *Ateles beelzebuth* in the Zoological Gardens; and we may safely conclude that it is a similar structure—a vestige of formerly pointed ears—which occasionally reappears in man."

Darwin thus explicitly attributes the observation to Woolner; but with the exception of Johnson Symington in his edition of *Quain's Anatomy*, who rightly refers to both Darwin and Woolner, almost all anatomists, English and foreign, call the structure "Darwin's tubercle," no doubt because he first described it in print. The Basle nomenclature termed it *Tuberculum auriculae Darwini*, but the Anatomical Society's revised nomenclature of 1933 drops the eponym and calls it simple "tubercle of auricle." Symington reminds us that the tubercle is constant in the embryo of about the sixth month, and occurred in about 30% of adult cases examined.

[1] *British Medical Journal*, May 18, 1946, p. 772.

Reports of Societies

PENICILLIN INHALATIONS FOR LUNG INFECTIONS

At a meeting of the Section of Experimental Medicine and Therapeutics of the Royal Society of Medicine on July 11, the subject under discussion was penicillin inhalation for pulmonary infections.

Dr. J. H. HUMPHREY said that, like other workers, Dr. Joules and he had found that penicillin given intramuscularly was disappointing in the chronic cases, such as bronchiectasis and lung abscess, which made up a considerable proportion of the admissions to a county hospital. It was therefore decided to try some other method of approach. Patients willing to co-operate and presenting clinical examples of the various diseases were investigated. An estimation was made of the penicillin in their sputum. When penicillin had been given intramuscularly it could afterwards be detected in only 2 out of 26 samples of sputum from patients with chronic pulmonary disease.

Fortified by some American and other experience, they then gave penicillin by inhalation. Two types of inhaler were used, one the Collison inhaler, which broke up the penicillin solution into very fine droplets, and the other the ordinary hand inhaler. Patients were asked to inhale, and afterwards—at periods from two to eight or twelve hours—the sputum was examined. Relatively large concentrations of penicillin were found, and they were satisfied that this was a practicable method of administration. With the Collison inhaler it was found that in ten minutes' inhalation about 1.5 ml. of the solution could be nebulized. By giving four inhalations in the day, with a double dose at night, bacterial stasis was obtained over the twenty-four hours. Dr. Humphrey described the effect of inhaled penicillin on the various organisms. Diphtheroid bacilli and spirochaetes disappeared rapidly; others, such as monilia, *M. catarrhalis*, and occasionally fusiform bacilli, tended to persist. An examination of cases which came to necropsy showed that Gram-positive organisms persisted in the bronchioles long after they had disappeared from the sputum; therefore, even in the presence of negative sputum, treatment should be continued.

Clinical Indications

Dr. H. JOULES said that this treatment had been used extensively during the last nine months in the general wards. About 100 cases were treated by inhalation, and it had had a striking effect on the whole outlook of these patients in the winter and spring. The oustanding feature had been the elimination of coughing as a disturbing element in ward life. Previously the ward had "resembled a Cruft's dog show," but now serious coughing was confined mostly to patients with carcinoma of the lung and patients just beginning treatment. The general principle had been to give sulphonamide therapy at once when clinical examination showed pneumonic consolidation. When the initial examination suggested that it was mainly intrabronchial aerosol penicillin was given from the outset. Sulphonamides had led to the rapid clearing up of the pneumonic process, but where there was a generalized bronchitis with some degree of spasm inhalation therapy had been of great value. It must not be supposed, however, that penicillin inhalation was the complete answer to the problem. Most Gram-negative organisms had resisted their efforts, and they awaited the coming of streptomycin or some such agent. Of 80 cases, all severe enough to be admitted to hospital, treated with penicillin inhalations, 46 had been much improved, 17 improved, and 17 not improved. Two cases of silicosis and bronchitis were not improved.

	Total Cases	Much Improved	Improved
Chronic bronchitis and spasm ..	20	15	5
Bronchiectasis	18	12	4
Respiratory infection with congenital heart failure	15	7	4
Pneumonia and generalized bronchitis	11	7	4
Lung abscess	5	3	0

He also related the experiences of a surgical colleague, Mr. L. Fatti, working at another hospital, who had used penicillin inhalation in association with pneumonectomy and lobectomy. Without penicillin 13 cases out of 22 developed fistula; with penicillin in the pleural space, 5 out of 15 cases developed fistula, and with penicillin in the pleural space and inhalation, only 2 out of 18 cases developed fistula. The fistula rate in the three classes was thus 60, 33, and 11% respectively.

Dr. Joules spoke with some diffidence of the results of penicillin inhalation in cases of chronic tuberculosis with large amounts of sputum, but a considerable diminution in the amount of sputum had been obtained, and the patient's life had been made more comfortable. Penicillin inhalation had also been used pre-operatively for patients who had a tendency to bronchitis, but the series was too small and the bacteriological indications too indefinite to permit discussion as yet. On the whole, it was possible to give a guarded commendation of aerosol penicillin, but it was too soon to speak with confidence of the future lives of people with chronic pulmonary infections who had shown immediate improvement.

Dr. L. CAPPER said that experience at the London Chest Hospital confirmed Dr. Joules's remarks in general. A good deal of symptomatic improvement had been obtained with aerosol penicillin, but in many cases it was not the complete answer. He demonstrated a new penicillin inhaler which had been used at the London Chest Hospital for some months past. It was worked with an oxygen cylinder. Specimens of sputum collected on the following morning—some twelve hours after the last inhalation—had shown concentrations of penicillin reaching as high a level as 14 units per ml. The method had been used in suppurative pneumonitis, lung abscess, and carcinoma of the bronchus.

Dr. AVERY JONES asked whether any marked difference had been found in the results with the Collison and with the hand inhaler respectively. Dr. JOULES replied that the Collison had been used for the majority of the cases treated in the wards, whereas the other had been used for out-patients, and therefore no valid statistical comparison was possible.

ASSOCIATION OF UROLOGICAL SURGEONS

The British Association of Urological Surgeons met in London on June 27, 28, and 29. At the business meeting a memorandum on a urological service for the country was passed for submission to the Ministry of Health, through the Royal College of Surgeons. At the scientific session a discussion on "The Treatment of Benign Enlargement of the Prostate" was opened by the President, Mr. R. Ogier Ward, and continued throughout the morning. In the afternoon operations and demonstrations were given at seven London hospitals. A dinner, at which 82 members and guests were present, was held at the Royal College of Surgeons on the evening of June 28. The principal speaker was Sir Ernest Rock Carling, who complimented the Association on its memorandum putting urological requirements on a regional basis. It is proposed to hold the next annual meeting in Glasgow in 1947.

BIRMINGHAM UNITED HOSPITAL

In its eleventh annual report the Birmingham United Hospital, which includes the General Hospital founded in 1766 and the Queen Elizabeth Hospital at Edgbaston opened in 1938, welcomes back ten members of the medical staff after a long period of absence with the Forces, during which "they rendered most distinguished service in many parts of the world and achieved high rank and responsible office." Three members of the honorary staff have lately reached the retiring age—Prof. Seymour Barling, Prof. W. Gemmill, and Mr. Beatson Hird; and one other—Dr. R. H. Astbury—has retired for reasons of health; and the Board pays a high tribute to the services they have rendered. It has been decided to appoint to the staff three assistant physicians and five assistant surgeons, and in these appointments the new advisory committee, composed of the medical committee and representatives of the Medical Faculty of the University, is acting for the first time. The decision of Birmingham University to appoint full-time professors to the departments of medicine, surgery, midwifery and diseases of women, and paediatrics is welcomed. Much of the work of three of these professors will be carried out in the United Hospital. Financially the Board faces an uncertain future. Expenditure grows with new and extended services, and income shows no signs of expansion. "Devoted as the Board is to the voluntary principle . . . it must now be recognized that without some substantial increase in income the present full service given by the United Hospital cannot for long be continued."

Correspondence

Industrial Rehabilitation

SIR,—Further to the report of the B.M.A. Committee on Rehabilitation (*Supplement*, June 29, p. 187) you may be interested to have details of the industrial rehabilitation scheme now in operation at this factory.

A special rehabilitation machine shop or, as we prefer to call it, a Re-Training Shop, accommodating up to 40 persons, has been in operation here since April of this year. The shop is housed in a new building, and factors such as colour dynamics, lighting, and the local surrounding amenities have been the subject of special study. Here, through the medium of machine or bench work modified and adapted so as to secure the necessary movements, remedial exercises designed to assist recovery are prescribed for works accident and other cases under the direction of the company medical officer or the visiting orthopaedic surgeon. The shop is in charge of a whole-time rehabilitation superintendent, a trained engineer of some seniority within this organization and with an intimate knowledge of men and machines and of the many differing types of work done throughout this factory. Before taking up his duties the rehabilitation superintendent was given ample opportunity of studying the background of his work in its social, economic, and technical aspects. Working under the company medical officer, to whom he is responsible, his duties extend beyond the confines of the rehabilitation shop to fulfil what might fairly be described as those of an occupational therapist in the engineering sense with regard to placement of incapacitated persons within the factory generally. In this work he has the active co-operation of the personnel and employment managers. An assistant rehabilitation officer, selected on account of his personality and technical abilities as both teacher and demonstrator of machine shop practice in the apprentice school, is in immediate charge of the men working in the Re-Training Shop, and his services are available should the need arise for vocational training, for which provision is made within the framework of the scheme as a whole.

Although intended primarily for works accident cases, the rehabilitation shop also admits wounded ex-Service men and other employees injured while away from work if they are anxious to return, working in co-operation with the private doctor concerned and with outside hospital services and clinics. A considerable proportion of medical and psychological cases presenting difficulty in placement or as a result of prolonged absence from work constitute fully 50% of the cases dealt with, and the more difficult ones are admitted to the Re-Training Shop for graded work until such time as they can be satisfactorily accommodated elsewhere in the factory. In this connexion emphasis is placed on finding the "right job" rather than a "light job," and so far as aetiology is concerned our experience up to the present has tended to confirm the relative proportions of 25% surgical, 25% neurotic, and 50% medical cases mentioned in your leading article on rehabilitation on June 29.

While working in the Re-Training Shop the men are encouraged in a positive outlook towards recovery, and are directed to put a maximum effort short of fatigue into their work in return for a system of payment which is equivalent to their basic rates of pay plus 20% in lieu of bonus. Suitable work of a useful and productive nature is diverted from the factory and scheduled for the Re-Training Shop, and in comparison with production lines elsewhere in the factory where the group bonus system of payment is in operation its efficiency rate is between 60 and 70%. In no sense is the Re-Training Shop regarded as a refuge for invalids, and the general morale of the men has remained consistently high. Since the shop was opened in April this year some 78 cases have passed through, of which 29% have been medical, 55% surgical, and 16% psychological.

Prejudice on the part of the injured workmen or lack of co-operation from others have been conspicuous by their absence, and it is becoming increasingly rare for accident patients to cease work while continuing under treatment at the factory or with the casualty or fracture clinic at the local hospital. In this respect the medical officer has the full co-operation of the private doctor. Plaster cases, if ambulant, are placed, wherever possible, at their usual work, or are found modified work within the factory, but failing this they are admitted to the Re-Training Shop.

The company medical officer works in close liaison with the casualty department and fracture clinic at the Luton and Dunstable Hospital, which is in charge of a full-time orthopaedic surgeon. Injured persons are asked to report back to the surgery on their return from hospital, and on the recommendation of the medical officer to the rehabilitation superintendent they are found suitable work wherever possible, thus maintaining continuity of treatment until recovery is complete. Ancillary to this service is a fully equipped physiotherapy department staffed by two whole-time members of the Chartered Society of Physiotherapy, and here immediate treatment for works accident cases and after-treatment back to full work is provided for all those remaining at work. The orthopaedic surgeon attends the factory on one half-day a week and holds his follow-through clinic for injured and fracture cases in the physiotherapy department. The physiotherapist and rehabilitation superintendent attend this clinic as part of the rehabilitation team and accompany the visiting surgeon on his weekly round of the Re-Training Shop.

Cases requiring further investigation or *x*-ray examination or plaster changes at the fracture clinic, which is held in the local hospital, are collected together at the end of the week and, in company with the rehabilitation superintendent and the physiotherapist, are transported to and from hospital by coach at the company's expense. In this way close co-operation between surgeon and engineer is thereby secured and has a marked effect from the psychological point of view on all those undergoing treatment. It also has the advantage of saving much time and trouble which might otherwise have to be spent in an already overloaded outpatient department. A consulting plastic surgeon is also a member of the rehabilitation team and sees cases both at the hospital and in the factory in consultation with the orthopaedic surgeon and the company medical officer.

Some form of rehabilitation has long been practised at this factory where people injured at work or returning after prolonged illness have received special consideration on the recommendation of the medical officer through the active co-operation of foremen, managers, and the personnel department. This co-operation is none the less evident with the establishment of a comprehensive rehabilitation scheme, and I look forward with confidence to an ever-widening field for this very important advance in social medicine.

—I am, etc.,

A. R. THOMPSON,
Medical Officer.

Vauxhall Motors Ltd., Luton.

Drug Eruption after Sodium Pentothal

SIR,—With reference to drug eruptions due to sodium pentothal, mentioned by Dr. G. A. Grant Peterkin (July 13, p. 52), the following case report may be of interest.

Mr. H., aged 40, was admitted to this hospital under the care of Mr. W. Donald Bedford for a radical cure for bilateral inguinal hernia. The operation was carried out under pentothal and nitrous oxide. Thirty-six hours after operation an urticarial rash appeared on the patient's chest, face, and arms and a scarlatiniform rash on his hands. Post-operatively the patient had only had glucose drinks and some luminal. The luminal he had had before operation without any reaction, and it was supposed that this rash was due to the pentothal.

The urticaria settled down with calcium lactate injections, and five days after the appearance of the rash his hands started to peel. As in the case reported by Dr. Grant Peterkin, a patch test for pentothal was negative.—I am, etc.,

Hertford County Hospital. M. D. WARREN.

SIR,—In his medical memorandum on "Post-operative Mania treated by Continuous Intravenous Pentothal" (June 22, p. 954), Dr. A. Robertson Kerr makes the remarkable statement that "little has been written about the action and effects of sodium pentothal, even as a short-acting anaesthetic."

R. Charles Adams, in his book *Intravenous Anaesthesia*, quotes 260 references in the chapter on pentothal, and, of course, there are many more publications which either were not referred to in the text, or have been published since the book went to press in 1944.—I am, etc.,

Accra. G. M. WYANT.

Amnesia after Trilene

SIR,—Towards the end of "A short Survey of Trilene in General Practice" (July 6, p. 10), Drs. A. Barratt and S. H. B. Platts state that "An interesting and *otherwise unencountered* property of trilene has come to light. In rather more than 20% of cases complete amnesia followed its use." The italics are mine. They suggest that this figure might be raised by certain expedients. I notice that their bibliography does not refer to my article "Trichlorethylene and Midwifery" (*J. Obstet. and Gynaec. Brit. Emp.*, April, 1944), in which the following appears: "All patients were amnesic. Some had short retrograde amnesia and were bewildered at finding delivery completed, having no recollection of the application of the mask."

Incidentally, Drs. Barratt and Platts might find that the use of the simple cheap apparatus described by me would raise

their 20%. I hope to make a further communication regarding the suitability of this apparatus for general practice midwifery at an early date.—I am, etc.,

Stockport. WALTER CALVERT.

Statistics and Mathematics

SIR,—If Mr. P. J. Hilton and Dr. S. M. Hilton (July 20, p. 102) used fewer technical terms and paid more attention to the ordinary usage of words, they would be better equipped to instruct your "non-mathematical readers," among whom I unhesitatingly rank myself. When your correspondents have had a little more experience, they will realize that something more than a facility in the use of arithmetic and algebra is needed to justify the title of mathematician.

Dr. Rewell was confronted by an "event" which, on the hypothesis of "chance," would be a statistical rarity; he therefore entertained an alternative hypothesis. I have but a superficial knowledge of genetics and am humble-minded enough to believe that he was justified in reporting his observation so that geneticists might consider the alternative. Your correspondents attempt to show that Dr. Rewell claimed that *he* had statistically demonstrated the superiority of the alternative hypothesis. This they do by italicizing the word "must" in a particular sentence. We all use words in common speech a little loosely, even your correspondents. They were not "constrained"—viz., forced—to ask anybody any question; still less to apply a wholly irrelevant extract from a paper of mine in a disparaging sense to Dr. Rewell.

I should think a "real" mathematician might connect two lines of algebra with the words, "We must conclude"; and might say to his wife at breakfast, "My dear, I must catch the 9.30 train"; and that the same word would be understood by any man to have a slightly different connotation in the two uses. Had I said in my letter, "I am afraid Mr. Hilton and Dr. Hilton are talking dreadful nonsense," I think they would have been wholly justified in accusing me of discourtesy. If they had said: (*a*) that I clearly did not understand what fear was and quoted an article on claustrophobia; (*b*) that nonsense, however irritating, simply could not excite dread; I, and your other readers, would have thought them merely silly.

The application of statistical methods to medical investigations has been the business and pleasure of my life for nearly 40 years and will continue to be its solace. I can remember the scornful contempt with which many of the leaders of our profession treated that sort of "mathematical trifling" long ago and rejoice in the change of attitude. Your correspondents perhaps underestimate the proportion of your readers who are as familiar with the technique of biostatistics as they are. But I agree that many of your readers are bored by technical jargon. If, then, they find the author of what seems to them a modest and sensible annotation rudely pelted with jargon, they will not form a pleasant idea of the use of statistical methods or of the manners of statisticians.

That, Sir, is why I, rather officiously, defended a colleague who may well have thought he needed no defence,—I am, etc.,

MAJOR GREENWOOD.

Book Reviewing

SIR,—I was delighted to read Mr. H. Osmond Clarke's plea for signed reviews in your issue of July 20. The uninstructed who come fresh to the reading of a weekly medical journal might well imagine that half the paper is written by two or three industrious and omniscient gentlemen, sitting in an office and vigorously scribbling from Thursday morning to Tuesday night. Even the less ignorant would be surprised if they were made aware of the number and distinction of your anonymous contributors. The modern trend in journalism is rightly in favour of publicity; one of the last redoubts of anonymity to fall was the *Punch* book reviews, which are now signed by the initials of the writer, whose full name is later given in the index. It is possible that book reviews might be kinder to the authors if this practice was adopted in medical journals, though no one could accuse medical reviewers of consistent harshness or unfairness. Indeed, it would be as easy to make a case against them for excessive generosity.

It might be argued that literary reviewers have grown in charity as they have discarded their anonymity, but this decrease in bookish ferocity is related rather to the increasing mildness of public manners in the last hundred years, particularly since the twentieth century has provided us with other outlets for our aggressive instincts. I have not observed that present-day reviewers lack the courage to state their opinions forcibly. I can recall a review of Rebecca West's which runs thus in my memory: "Mr. X.Y.Z. has written another novel. How long, O Lord, how long?" And the book of a distinguished lady novelist, entitled *This is the End*, which earned the laconic tribute from a literary knight that he hoped it was. From what I know of your modest contributors I should say that their reputations are sufficient to sustain their opinions, and their characters firm enough to defend them.

Away, then, Sir, with anonymity.—I am, etc.,

Derby. DOUGLAS HUBBLE.

SIR,—Although, as an author, I have had nothing but most helpful criticism from your reviewers, I should like to support Mr. H. Osmond Clarke (July 20, p. 102) in his request that the reviews should be signed. A signed review carries authority, and is far more interesting to all readers than an anonymous review.

While on the subject of the review column, I have gained the impression that as much, or even more, space in your *Journal* is devoted to reviews of foreign books as of those emanating from the British Empire. Many of these foreign books are on subjects of little interest to the general reader, and on several occasions lately I have found that foreign surgical books that you have reviewed are unobtainable through the leading London medical libraries. I suggest that, if I am correct (and no doubt someone can be found to supply the statistical data), it would be a good rule to devote two-thirds of the available space to reviews of British books, and relegate some of the foreign works, particularly those on extremely specialized subjects, to the "Notes on Books" section.—I am, etc.,

London, W.1. HAMILTON BAILEY.

SIR,—I was very interested to read the most instructive letter (July 20, p. 102) written by Mr. H. Osmond Clarke dealing with the subject of reviewing medical books. I would like to draw your readers' attention to another aspect.

I have carefully analysed all reviews since August 4, 1945, to the present date, July 20, 1946. In these fifty-one issues I have tabulated all reviews published. Pride of place always seems to go to the American publications, and on 26 occasions an American book has been given the first place under "Reviews" in your *Journal*. British books fall short with 22, while foreign publishers have had this honour on three occasions. Why over-emphasize American books and relegate British books to an inferior position?

Further, when an important new edition is published by British publishers the review is often relegated to the last section of reviews under "Notes on Books," and very often a most important book is dismissed in a few sentences, while anything that comes from either American or foreign sources is given undue prominence. Should we encourage this inferiority complex or are British books deteriorating that we are afraid to give them the publicity they deserve? Is it not time that we started to sponsor our own wares, or at least see that British books are given a square deal and the brake put on in trying to flatter these American tomes?—I am, etc.,

Edinburgh. E. A. MCWHIRTER.

Paralytic Ileus

SIR,—While looking over some old copies of the *Journal* on my return to civilian life after four and a half years' service, I noticed in the correspondence columns (Feb., 1946) a discussion on post-operative ileus. In the methods suggested for the amelioration and prevention of this distressing complication I could find no mention of physiotherapy as a possible means of relief and prevention.

For reasons not far to seek, physiotherapy has never really been allowed its proper place in this country as a definite department in the practice of medicine and surgery. There has always appeared to be a tendency for the average practitioner to regard physiotherapy as the province of the "medical electrician" and the masseuse. In most hospitals I have been in, in England, the physiotherapeutic department is relegated

to the basement of the building in what, under other circumstances, would have been the cellars. This department, as a rule, has no specialized chief-of-staff, but is under the *aegis* of the radiologist, dermatologist, or orthopaedic surgeon, none of whom would appear to place much faith in this cuckoo in the nest. Prior to the war there appeared to be a tendency to relegate the so-called hospital chronics to this department as a sort of last resource, on the principle that if it did not do them any good it could not do them any harm. The illusion that the beneficial results of physiotherapy are solely of a psychological nature appears to be still present in many minds.

In America, however, physiotherapy has long since found its place in the armamentarium of the physician and surgeon. Post-operative, short-wave, infra-red irradiation of incisions in abdominal and pelvic surgery have proved of inestimable value, speedily banishing pain and promoting rapid healing. Miller (*Arch. phys. Ther.*, 1932, **13**, 99) subjected cases, forty-eight hours after operation, to a 30-minute exposure, the point of intensity of I.R. being focused on the abdominal wound, which was denuded of dressings. This irradiation was followed by a general U.V. treatment administered to the body sectionally. He described the effect of I.R. on the tense, distended, and tender abdomen as spectacular. Patients who were writhing with pain went off to sleep before the 30-minute treatment had been completed. His splendid results with post-operative ileus convinced him that, if I.R. could relieve, it would prevent this, and his experience goes to prove that it does. The effect produced by I.R. on the static post-operative intestine is, at least in part, explained by its penetration, the production of heat in the tissues, and the dilatation of the blood vessels, bringing a greatly increased supply of fresh arterial blood to the part. Miller thought that it might further be explained on the basis of reflex action. The nerves arising from the spinal cord supplying the abdominal skin have also sympathetic branches which supply the abdominal viscera. Inflammatory conditions within the abdomen cause increased sensitivity to corresponding skin areas. Miller's contention was that the soothing action of the I.R. rays upon the nerves supplying the abdominal skin reflexly caused a relaxation of tension within the abdomen through the spinal sympathetic innervations. He admitted that this theory was, of course, speculative, but he believed it explained the action of I.R. upon the static bowel.

Another aspect of abdomino-pelvic operative cases subjected to routine post-operative I.R. therapy was that they very seldom had the common complication of retention of urine. Miller found, on comparing records, that those abdominal cases treated as described not only had relief from the greater part of the usual post-operative distress, but that they rested better, healed more quickly, gained strength more rapidly, and, as a consequence, spent approximately 3½ days less in hospital than those cases not so treated.—I am, etc.,

London. R. DOUGLAS HOWAT.

Rheumatic Fever

SIR,—In view of the opportunities for the study of rheumatic fever in the American and British Armed Forces, Dr. H. S. Barber's paper on "Rheumatic Fever in the R.A.F." (July 20, p. 83) is of considerable interest. Unfortunately, as in so many recent publications, the literature of the subject has been most carefully reviewed and quoted, but possible observations on the clinical condition of the patients is minimal, and various lines of investigation seem to have been left unexplored. It is very difficult to understand how rheumatic joints can be considered an allergic manifestation; as Dr. Barber obviously inclines to this belief, will he explain the response of the joints, the fever, the sweating, and the pain, to sodium salicylate, and does he regard the peculiar distinctive rheumatic pathology (the Aschoff body) as an allergic manifestation?

If this belief of allergy of rheumatic manifestations can advance our knowledge of rheumatism, either its aetiology or its treatment, I shall be content, but if the supposition does not help in diagnosis, prognosis, or treatment, why use the term? It seems to be suggested in this paper that the joint manifestations in poliomyelitis or tuberculosis are allergic; I suppose that Dr. Barber knows of the joint changes which occur after hemiplegia? Is this also an allergic manifestation? And what is the explanation of the fact that such joints do not respond to treatment with sodium salicylate?

This paper is disappointing in that there is no detailed account of treatment. There is no mention of E.S.R. rates and how these changed as convalescence went on. Nor are we given any information as to *x*-ray changes, although we are told that when there was a doubt the size and configuration of the heart were checked radiographically. How exciting it would be if any of those expected concertina-like expansions and contractions of the heart were actually encountered and recorded.

Acute rheumatism is a very difficult subject; many years of the closest possible observation with the best possible clinical investigation are essential, and papers which merely quote literature and mention a small number of cases will not advance knowledge.—I am, etc.,

Birmingham. K. DOUGLAS WILKINSON.

Shock Treatment of Bronchial Asthma

SIR,—Bronchial asthma, like other allergic conditions, can be considered as an expression of parasympathetic irritation. In terms of immunology it is like anaphylaxis, a state short of immunity. Anaphylactic shock in experimental pathology may lead to complete immunity—if the animal survives. Similarly, shock in an allergic person may lead to longer or shorter immunity—if doctor and patient are prepared to take the risk involved. I had the good fortune not to have a fatality among the great number of allergic patients treated so far. Other specialists have been less fortunate. I remember, however, with some trepidation two very severe shock reactions observed by me in the early twenties when methods were less elaborate. One, a boy who developed lung oedema, fall of B.P., and collapse after injection of antitoxic diphtheria serum (an atopic type of allergy); the other, a young woman with hay-asthma and similar signs of shock after a strong injection of pollen extract.

Since then I have had, and still have, the opportunity to see a very great number of asthma patients, both in hospitals and in private practice. I think that everybody with similar experience will agree with me that the variety of causes leading to asthma is great, and of varying importance not only in different patients but also in the same individual at different periods of his life. By long experience I have come to the conclusion that by far the best results are obtained by a complete analysis of all relevant factors through a careful case history and complete investigation of each case, including allergic skin tests or other allergic tests.

Apart from the symptomatic treatment of the attack by stimulation of the sympathetic nervous system (adrenaline, etc.) or paralysing of the parasympathetic (atropine, etc.), full immunization or lowering of the irritability of the parasympathetic is the aim, and may be obtained by specific or unspecific desensitization, ranging from a mild shock therapy by injection of the patient's own blood to a prolonged or quick desensitization with the specific allergens (hay-asthma). The doctor who deals with these conditions should always be aware of the dangers involved. He should also be aware of the fact that so far there is no royal road leading to success in *all* asthma cases. There is, however, hope that this may be achieved by intensified research in the not too distant future, and I can think of a number of ways which may ultimately lead to full understanding and full success.—I am, etc.,

London, W.1. E. M. FRAENKEL.

The Hypochondriac's Treatment

SIR,—Dr. E. D. Granger (July 6, p. 27) has given his interpretation of Dr. Summerskill's phrase "in future no doctor need prostitute his service by pandering to hypochondriacs." May I be permitted to give mine?

The treatment of moderate degrees of neurosis should constitute an important part of the G.P.'s work—a part which could be of tremendous service to the patient, his relatives, and the community. He has intimate knowledge of the patient's emotional, domestic, and financial background, and this should enable him to advise the latter how to make the most of his life. Yet all too often this side of general practice is partially or wholly neglected. Why?

A.—In the case of the *neurotic private patient*, the reason is summed up in the words of the old doctor who said to his young

and enthusiastic assistant: "For goodness' sake don't cure that woman. I'm relying on her to educate my son." Few doctors will put their whole heart into the treatment of a patient when they know that a successful result will mean a large slice off their income.

B.—The *panel neurotic*. Treatment of neurotics takes time and patience. Will a doctor spend an hour talking to a panel neurotic in the morning surgery when he might be doing half a dozen "private" visits? Some doctors may, but many will be tempted to send him off with a "bottle of medicine" and a "neurasthenia certificate." (Panel patients who are coal merchants, grocers, or poultry-keepers come, of course, under class A. They are the *crème de la crème* of any practice.)

How I should like to see an inquiry into some of these pink "neurasthenia certificates"! No doubt there are many cases of anxiety neurosis, due in part to overwork, which do respond to a few weeks' rest. But there are a large number of other types of neuroses for which the cure should be rehabilitation by suitable work. In this type of case the best doctor is the one who has the moral courage to refuse the pink certificate.

Under a National Health Service, where one patient does not differ in financial value from another, there should be no incentive to postpone the cure of the private neurotic. Doctors can cheerfully spend the necessary time on panel neurotics in the secure knowledge that the Government is looking after their financial interests.—I am, etc.,

Rotherham. ANNE M. TOMS.

Penicillin and Venereal Disease

SIR,—I have read with interest recent letters on the above subject and would like to add mention of a case of gonorrhoea particularly resistant to penicillin.

The patient, a male aged 25 years, was admitted to hospital with a purulent discharge of twenty-four hours' duration, and on microscopical examination a diagnosis of gonorrhoea was established. A course of three injections of 50,000 units of penicillin every four hours was given with a reduced fluid intake, and the discharge disappeared. However, forty-eight hours later it reappeared with no history of re-infection. A further similar course was administered and again the discharge disappeared, and a rectal examination showed no evidence of prostatic infection. The patient seemed quite fit and was discharged.

One week later the patient returned with a generalized papular eruption, joint pains, temp. 103° F. (39.4° C.), pulse 90, and marked malaise. A prostatic examination revealed a tender swollen area of the upper pole of the left prostatic lobe; the seminal vesicles appeared normal. The rash lasted only twenty-four hours and was regarded as allergic, but the left wrist-joint, the proximal joint of the right great toe, and the left sternoclavicular-joint became the seat of an acute arthritis. It is interesting to note that though the sternoclavicular-joints are only affected in 2% of gonoccocal arthritis, it is very rare for these joints to be involved in any other form of arthritis. Again penicillin was administered and 250,000 units were given in all. Frequent prostatic massage and pot. permang. irrigations were commenced. In three days the arthritis subsided and the inflammation of the skin overlying the joints disappeared. After a further two days the prostatic swelling and tenderness were absent and the urine remained clear in all three glasses. Blood taken at the commencement of the arthritis gave a positive serological result.

I feel that this and many other cases I have had of recurrent discharge, after the usually recommended total dose of 150,000 units of penicillin, indicate that this amount may be inadequate and perhaps ought to be as high as 250,000 units per course as advocated in America.—I am, etc.,

Istre. L. GRANT DUFF, R.A.F.V.R.

Notification of Venereal Disease

SIR,—I was recently serving with about six hundred Royal Marines in the vicinity of Newcastle, N.S.W., a large industrial town and the centre of the Australian steel trade. Over a period of six months I had no cases of venereal disease, except one or two cases of gonorrhoea acquired by men on passage out from the United Kingdom. The medical officer in charge of the Newcastle Hospital told me that he had only seen three primary chancres in the past ten years, and that gonorrhoea was practically non-existent in the town.

This condition had been achieved by compulsory treatment, and penalties if the patient defaulted. He informed me that the penalties were never enforced, but were a useful threat. I feel that if such a desirable state can be obtained by compulsory treatment there is no possible excuse for allowing our present lax methods to continue. It would be a very strange man, whether he was a venerable dean or a bus conductor, who has not at some time or other run the risk of venereal infection, and I think it is about time the obvious course was taken with these diseases.—I am, etc.,

Fareham. G. G. THYNE.

Psychology in the Child's Education

SIR,—Dr. D. W. Winnicott (June 29, p. 998) recommends regular visiting to ensure that small children in hospital retain their emotional contacts with their parents, which means in some measure, to use Dr. Winnicott's provocative phrase, "keeping them sad." Dr. J. A. McCluskie (July 13, p. 62) hazards that it is the initial separation that does the damage and advises against its repetition by frequent parental visits.

It is obvious that an issue of this kind will not be solved except through properly planned research, and Dr. McCluskie's call for controls is timely. Yet the evidence, such as it is, is very much against his view. The cases which I personally have seen have been of children who, between the ages of 1 and 5 years, have been in hospital for many months *unvisited*. Their most striking symptom has been habitual stealing, and their most important feature, psychopathologically, an impaired ability to make emotional relations with their parents and others. I have seen no child in the same mental condition who had spent the same number of months in hospital during these years and who had been regularly visited, though I have seen many in this condition who have had an experience similar to being in hospital unvisited—e.g., temporary placement in institutions or with foster-parents. The association between long separations in early childhood and later incapacity to form good personal relationships can be demonstrated both statistically and clinically.

Workers who had experience with children in residential nurseries during the war agree that the children who were easiest to manage were those who had good home ties and could look forward to regular visits. Those who became difficult were those whose mothers rarely or never visited and who felt, in consequence, deserted. They became either extremely demanding of the attention and affection of members of the staff or else apathetic. Many such children are now being referred to child guidance clinics in the London area for difficult behaviour and stealing.

I believe that an adequate survey would demonstrate unmistakably that a proportion of children who are separated from their mothers for long periods in early childhood suffer some mental damage, much of which could be prevented by a system of regular weekly visits. That some children do not suffer in such circumstances is also highly probable. How big the proportions are and what other factors are operative remain problems for further research.—I am, etc.,

The Tavistock Clinic, London, W.1. JOHN BOWLBY.

SIR,—It is regrettable that Dr. D. W. Winnicott (June 29, p. 998) should impute that the main suggestion in my letter (June 15, p. 930) is "to the effect that children should be taught as the Nazi children were taught, only taught citizenship." I only referred to the readiness with which children were indoctrinated with principles of racial superiority in order to indicate how responsive they are to any method of teaching. The emphasis was *on their responsiveness to teaching* and not on teaching by means of a totalitarian system, which clearly could only produce precocious and undesirable conditioned reflexes.

A satisfactory scheme for the education of children in their instinctive and emotional reactions would have to be worked out by educational experts, bearing in mind, as Dr. Stephen Krauss (June 29, p. 998) so rightly emphasizes, the various phases in the normal development of the child. In order to obtain satisfactory results, greater attention would have to be paid to emotional development and intellectual capacity than to age in the segregation of children into classes.

I entirely agree with Dr. Winnicott that "the real source of good citizenship is in the life of the child in his own home"—provided that the parents are stable, happy, and intelligent. Unfortunately, a substantial proportion of parents are just as unsuitable for their job as are many teachers. We cannot select parents as readily as we can choose teachers, and I accordingly suggested that psychological guidance should be initiated at school. By all means let us learn as much as we can from

children, as Dr. Winnicott suggests, which is tantamount to saying that we should learn all we can about instinctive behaviour and human nature. My plea is to guide children along such lines, but there is no reason why adults should not also be encouraged to accept guidance and training in psychology. Dr. Winnicott asks, "Why is it that when we start planning we so easily start on the wrong foot?" I suggest that it is better to start on the wrong foot than never to start walking at all. But are we starting on the wrong foot? Are not children the parents of to-morrow, and by instituting psychological guidance in schools would we not, in fact, be rendering future parents more suitable for their jobs, so that the chances of subsequent generations starting off on the right foot in the direction of good citizenship would be all the greater?

I cannot appreciate Dr. Michael Fordham's objection (July 13, p. 62) to doctors expressing their views regarding the school curriculum. He would like us to leave teachers to their own job. My letter does not suggest depriving them of their function. Doctors, with their greater opportunities of getting to know and understand people, are in a good position to suggest what is good for them. My plan to introduce psychology into the school curriculum surely cannot be regarded as a medical encroachment on the teacher's province. Dr. Fordham would appear to support the idea of careful selection of teachers in so far as he agrees that "it is useless to talk on the subject of behaviour unless they themselves are good citizens," and for some reason or other he has decided that "if they are good citizens it is only of secondary importance what they say to children."

It is not sufficient, in my opinion, for teachers to have stability, character, intelligence, aptitude, freedom from prejudices and rigid social, political, or religious attitudes. They must know what to say, when and how to say it. It is not the doctor's business to teach teachers, as Dr. Fordham stresses, but surely we can all make suggestions, pool our knowledge, learn from each other, plan for the future, and endeavour in every possible way to make the world a better place to live in.—I am, etc.,

London, W.1. ELLIS STUNGO.

Socialism and the Pay-bed

SIR,—It is surprising that no one has so far replied to the points raised in the letter from Mr. J. B. Macalpine (June 22, p. 968). The insult to ordinary hospital patients implied in the view that large numbers of them are unfit for civilized company hardly needs an answer; but one hopes that no doctors really feel such contempt for these people. Incidentally, in my experience nurses who have worked in private wards have not always found their occupants to have that uniform selflessness and exquisite sensibility which Mr. Macalpine appears to associate with the ability to pay for separate accommodation.

The latter parts of the letter are not quite clear, but I am not aware of any evidence to support the view apparently held that the higher income groups have a superior genetic endowment. The highly coloured tone of these arguments hardly supports the claim made for our profession to act as biological instructors to the community.—I am, etc.,

Leeds. S. S. ALEXANDER.

The Health Service Bill

SIR,—I was heartened to read Dr. Victor Russell's lucid letter (June 1, p. 846), as he says if the Government were genuinely desirous of improving the medical services, some well-tried scheme on the lines of that used in New Zealand would be effective, without raising the issue of nationalization with all its associated administrative problems.

If this is applied, there is a free service in *all* branches of medicine for *all*; further, hospitals can retain their present status, but as every patient is a paying patient they need no longer be dependent on charity. Obviously, the better hospitals would be more popular, and a spirit of competition in providing the best hospital service would result; if the Government chose to build its own hospitals as well, this would provide added stimulus, and it would be interesting to see which proved to be the better of the two. If a sound counter-proposal like this could be presented to the lay public in simple language by the *B.M.J.* we should be in a position to reject the present dictated terms of the Minister *in toto*.

It is interesting that some months ago I was asked to address a meeting of airmen (almost all Socialist) on the Bill. At the end I was asked if the profession had any alternative to offer, I had to admit that they had not, but described the outlines of the New Zealand scheme. At the end I asked the chairman to take a vote, just as a matter of curiosity, and over 90% were in favour of some such scheme being adopted in lieu of the present measures. Why has this scheme never been really publicized? Is it too simple for politicians to grasp? I have met a number of New Zealand laymen in the Forces, who say it works excellently.—I am, etc.,

Cyprus. J. H. BERGIN, Flight-Lieut, R.A.F.

Authority and Independent Thought

SIR,—In his Price Lecture on epilepsy (July 6, p. 1), Dr. Gordon Holmes deals with this disease in his usual masterly fashion. He traces the theories of its aetiology from the time of Hippocrates up to the present day, passing on the way through a period in our history which saw the foundation of Eton and Winchester, Oxford and Cambridge, and scores of universities on the Continent of Europe, and which, as an eminent churchman recently said, "we of the atomic age still have the impertinence to miscall the Dark Ages." Throughout this lecture there is a recurring thought that seems to dominate the whole picture—i.e., the idea of conflict between authority and independent thought. If by "authority" Dr. Holmes means the authority of the text-book which sets forth masses of facts copied from other books (and errors as well), assigning rarely, if ever, a reason to account for any fact, then one must agree that the student who contents himself with absorbing such information is certainly not stimulated to independent thinking. So, too, in days gone by, even in the "Not-so-dark-Ages," those who slavishly followed the current superstitions, whether they concerned the fermenting humours flowing in the blood stream or the supposedly malign deeds of "witches," and forbore to use their critical faculties did grave disservice to their fellow men. But let us not forget that the mere 100,000 "witches" burnt in Germany fade into insignificance beside the extermination of millions of Jews in the same country in this age of enlightenment.

Dr. Gordon Holmes apparently subscribes to the view that the Church has been the enemy of science, a view that is not so widely held as heretofore. If so, why did the Church found universities? They were bound to stimulate independent thought. The Church, it is true, will only accept incontrovertible facts as truth, and has always refrained from acclaiming new theories with uncritical enthusiasm. This has often led to misunderstanding and, inevitably, also to misrepresentation. "Science which brings man nearer to God," to use Pasteur's phrase, can never be in contradiction with the Christian faith. It was Pasteur also who said, "I see everywhere the inevitable expression of the Infinite in the world." Dr. Holmes is a renowned authority on the subject of nervous diseases, an authority that we all bow to, but when he forsakes this sphere and ventures out into the realms of "dogma" and "heresy," etc., he is much more vulnerable.—I am, etc.,

Belfast. E. M. HICKEY.

Nutrition of Far East Internees

SIR,—In the report of the Nutritional Society's Conference (July 6, p. 22) I was interested to read Dr. Cicely Williams' reference to nocturnal diuresis amongst the Far East internees. Last year I met many internees in Hong Kong and Shanghai, and this subject was always prominent in their impressions of internment life. I have seen no explanation in the *Journal*. The internees attributed the diuresis to rice. Subsequent observation of the Japanese seemed to substantiate this. During three and a half months in Japan I cannot remember going more than a few hundred yards without seeing someone micturating in public. Is the urge behind this national characteristic attributable to their rice diet? If so, is it the water content or a specific diuretic? Perhaps some able mathematician will work out the number of people to be observed micturating per mile in this country if such was the custom, and so confound the observation! The persistence of diuresis for a few weeks after liberation may be explained either by habit or, as in so many cases, continuing with rice.—I am, etc.,

Worcester. C. ROMER.

Medical Notes in Parliament

HEALTH SERVICE BILL

REPORT STAGE—SECOND DAY

When the Debate was resumed on July 23, Mr. HOUSE moved an amendment to Clause 33. He proposed to insert the words "or others" after the words "medical practitioners" in the injunction that every Executive Council shall make as respects their area arrangements with medical practitioners for the provision of personal medical services for all persons who wish to take advantage of the arrangement. He said that nature-cure practitioners who reached a required standard of training and qualification should be recognized under the Bill. Such practitioners comprised naturopaths, osteopaths, and others. Patients should have the free and unfettered right to attend the practitioner of their own choice. Medical practice so far as it was based upon the application of medicines, drugs, and vaccines was undesirable. Mr. House referred to Mr. Bevan's recent illness, and remarked that in consequence of it he had lost a week or more of the Committee stage of the Bill. He said he had seen Mr. Bevan since with his little tins and pills and pellets. There had been an inquiry into osteopathy by the House of Commons in 1935, but the inquiry board was composed to a large extent of medical representatives, and so was unfair to start with. Furthermore, the osteopaths were not ready and many of their witnesses conducted their case foolishly.

Sir ERNEST GRAHAM-LITTLE said there had been a second inquiry in the House of Lords by a Select Committee. This had a very large number of sessions. In the middle of that inquiry the osteopaths threw in their hand and said they were not going further. Mr. EWART seconded the amendment and asserted that workers would not get the benefits of physiotherapy.

OSTEOPATHY AND ORTHODOXY

Mr. BEVAN said he thought that the heterodoxy of yesterday became the orthodoxy of to-day, and that the medical profession to-day practised many forms of therapy which it yesterday rejected. He did not intend to commit the indiscretion of forming a judgement on the relative merits of one form of therapy against another. The House was discussing an amendment which would place on the Executive Council of each area the obligation of providing whatever kind of medical attention any citizen might want. That was an impossible suggestion. The consequence would be that any Tom, Dick, or Harry would be able to prey upon the credulity of any citizen and could call upon the State to provide the money for that service. It was true that under the National Health Insurance Acts there was some provision, rarely exercised, for the subvention of a person who wished to have some form of medical treatment. That was difficult to administer, and if it were extended would be impossible to administer. Physiotherapy and occupational therapy were being extended and had been fostered by distinguished doctors.

Sir HENRY MORRIS-JONES said fine cures were achieved by nature-curers and osteopaths, but their failures were unknown and unsung. In many cases such treatments delayed orthodox treatment and resulted in a great loss of lives.

Sir ERNEST GRAHAM-LITTLE said that twenty years ago he had asked the House to institute an inquiry into the whole question of irregular practice. That inquiry was very necessary. Schools of naturopathy in this country were few and ill-equipped, and examinations were just puerile. Osteopathic schools were entirely confined to America. Sir Ernest recalled that Mr. Neville Chamberlain, then the Minister of Health, said he could not recognize examinations carried out in another country, and that when the osteopaths decided to follow courses of study approved as suitable for medical practice in this country there would be no difficulty in getting them recognized. Until an established scientific inquiry had been instituted there should be no recognition of any section of irregular practice. At present, quite properly, the irregular practitioner was not recognized. The amendment proposed by Mr. House was negatived.

Mr. TURTON moved an amendment dealing with the issue of medical certificates. Mr. BEVAN said that at present the issue of certificates was limited to those connected with insurance work. The Bill extended this. Further certificates would be issued for the purpose of any enactment under which certificates were required. That extended the obligation of the doctor. To suggest that a person should be entitled to receive a certificate from a doctor whenever and for whatever he required it was going too far. To widen the obligation further would meet with resistance from the profession. The amendment was withdrawn.

DIRECTION AND DISTRIBUTION

On Clause 34 Mr. J. S. C. REID moved to leave out the greater part of the Clause. He said it was proper that the House should come to a decision on this and subsequent Clauses which had alarming possibilities for the independence and freedom of the profession. He proposed to exclude from Clause 34 the words which limited the right of doctors to go on the list in an area with those who were in practice in that area before the appointed day. By his amendment any doctor would be entitled to go on any list in any part of the country where he offered his services, provided he was not personally objectionable. In committee it had appeared that the basis of these Clauses was the Government opinion that there was something evil about the purchase and sale of goodwill, and that the Clause controlling the movement of doctors was a necessary consequence of the abolition of the doctor's right to sell his goodwill. Mr. Bevan had not made a case that control of the movement of doctors was necessary. The strict limitation of movement proposed in the Clause was uncalled for even in to-day's circumstances. When this Bill came into operation with 100% of the population available for capitation fees, of whom he estimated about 90% would come into the scheme, there would be little difficulty in getting doctors to go to what were now difficult areas. The problem could be cured without any of the restrictions proposed by Mr. Bevan. There was no justification for this jurisdiction being conferred upon the Medical Practices Committee. When a vacancy occurred existing partners were not allowed to choose a practitioner they wished to come into their partnership. The question was to be remitted to the Local Medical Committee. He did not think this was for the good of the profession or for the good of the country. It was quite clear that the Minister wanted to dictate to the doctors.

Mr. BEVAN said: "Certainly not!" The buying and selling of practices was repugnant to the Government. That was the first principle, and another was that Parliament should seek to bring about an equitable distribution of a general practitioner service. These principles necessarily implied that Parliament must set up machinery for the distribution of general practitioners. The doctors would normally be consulted on the filling of a vacancy, and thus they would have a greater privilege than the members of any other profession. Then the Executive Council would make the appointment and the Medical Practices Committee would confirm it. Mr. Reid's amendment would wreck the whole Bill.

Sir HENRY MORRIS-JONES said Mr. Bevan was taking away from the doctors a right which they had now and they had never asked for that right to be taken away. Mr. BEVAN said Sir Henry was right, but the doctors were not yet in sole control of the country. It was Parliament which had decided that the country was going to have a public health service, and therefore it must construct the principles which made that service practicable. Mr. Reid had suggested that the doctors should have the right to enter the public service at their own will in any part of the country, claiming something which no other profession had. If doctors were allowed to go anywhere the scheme would be impossible to implement because the Ministry would never know where the doctors were going until they had gone. He did not say that if the doctors did not enter the public service they should be under restraint. They could put up their plates wherever they liked, but if they wished to receive remuneration from the public service one condition was that the doctor should not serve where his services were not required. This was a negative control over distribution.

Mr. HENRY STRAUSS did not believe it to be in the public interest that any district could say: "There are enough doctors here." The doctors in the barred district would be freed from all stimulus to efficiency. Mr. LINSTEAD pointed out that so long as a man was not going as a doctor but only as an assistant this clause did not apply. He suggested that as assistants were exempt from the Clause the case for direction in order to secure a proper distribution of medical practitioners was not proved. Mr. WILLINK supported the amendment, and after further discussion it was rejected by 277 to 128.

SALE OF PRACTICES

Mr. REID moved to leave out Clause 35 prohibiting the sale of medical practices. He said that Conservatives did not agree that there was any intrinsic reason for abolishing the sale of goodwill. The House had not been told of any practical benefit which that change would achieve. If Parliament did desire to stop the sale of goodwill they did not need so complicated and so oppressive a clause as Clause 35. It would be easy to draft a clause which would provide that there should be no

direct sale, and that other transactions which could be proved to be a cloak for payments which were really payments for goodwill would be illegal on being so proved and would be subject to penalties. The deliberate offender could be caught with a simple clause because intent could be proved against him, but under the present Clause thousands of innocent transactions would be impeded and probably there would be only half-a-dozen prosecutions in the end. For the sake of one or two people scattered over England a doctor or his widow could not sell his house to another doctor or make any partnership agreement with another doctor or take on another doctor as an assistant without going to the Medical Practices Committee under subsection 10.

Mr. BEVAN pointed out that subsection 10 had been put in as a protection because he was of opinion that many arguments previously advanced by Mr. Reid were sound. The State had set aside £66,000,000, which the medical profession agreed was extremely generous, and the State was therefore entitled to take precautions to ensure that any doctor did not get the benefit twice. The original Clause was drawn very tightly but had been amended in committee, and the doctor now had to obtain from the Medical Practices Committee, mainly a professional body consisting of his colleagues, a certificate that a transaction was reasonable. That was a defence against any action being taken. In a later amendment Mr. Bevan said he introduced the word "knowingly" to make clear that there must be awareness of the offence before it had been committed. In all the circumstances every kind of protection had been given in this matter.

After further discussion Mr. Reid's amendment was defeated by 305 to 110. On the Motion of Mr. KEY consequential and drafting amendments were made in the same Clause including the insertion of the word "knowingly," as promised by Mr. Bevan, and a provision that the sale of a partnership to an assistant shall be deemed to have been effected at the time when the remuneration was fixed.

DISQUALIFICATION OF PRACTITIONERS

On Clause 42 Mr. REID moved, where the Clause provides for inquiry into cases where it is represented that the continued inclusion of a person in a list would be prejudicial to the efficiency of the service, to add the words: "By reason of his failure properly to provide the services which he has undertaken." In committee the Minister had said that the local executive would decide whether a man was a bad influence. Mr. Reid contended that the local executive had to decide nothing of the kind. It had to decide whether a man had fallen short in certain specific respects. Under the form of words in the Bill it would be possible for a doctor to be dismissed by the Minister merely because the Minister thought he was a bad influence without anything having been proved. Mr. Bevan had gone on to say that the Government could not admit that the Courts should interpret whether the doctor had been in fact a good servant of the people. Mr. Reid remarked that this was a more authoritarian approach than the public was accustomed to in this country.

Mr. BEVAN asked what was wrong with the words "bad servant" and "bad influence"? Before the doctor could be removed something had to be proved against him. It was not enough for the Minister to dislike his voice or his politics. Something had to be proved which made him, in respect of his being a doctor, a bad public servant. The doctor might not be tending his patients properly although he might be a good doctor. All kinds of reasons might make him a bad person to employ and the Tribunal must take them into account, but they must always be concrete and particular reasons. It was for the General Medical Council to pass judgment upon a doctor as a doctor, but when a doctor was a servant of the National Health Service and fell short of what was required in rendering certain services, he was not a proper servant and was liable to be removed. The amendment was withdrawn.

THE RIGHT OF APPEAL

Mr. BEVAN moved to insert in the same Clause the words: "(4) An appeal shall lie to the Minister from any direction of the Tribunal under the last foregoing subsection and the Minister may confirm or revoke that direction." Mr. Bevan recalled that in committee the words "appeal to the Minister" in the case of a dismissal of a doctor had been deleted and that a proposal to substitute an appeal to "a High Court judge" had not been substituted. He said this was a matter of importance. The Minister and the doctor, or rather the Executive Council and the doctor, were in some respects in the relationship of employee and employer, and it would be perfectly proper if the employer could dismiss the employee without any redress. But it had seemed to him that it would be difficult if not impossible for doctors who were removed from the service to obtain a livelihood outside, and that special protection should be given to the individual against any possibility of injustice. Mr. Bevan said that by his own plan he interposed a tribunal between himself and the Local Executive Council, which might for one reason or another be prejudiced. The Chairman of the Tribunal would be a local person appointed by the Lord Chancellor but not a dentist or a doctor. If the Tribunal decided that the Local Executive was correct in its decision, the doctor had a further appeal to the Minister, who would then institute an inquiry. He could appeal on one of three grounds. First, that the procedure laid down for his trial had not been carried out; second, that the Tribunal had exceeded its powers; third, that the principles of natural justice had been violated. Conservative members suggested that instead of the doctor appealing to the Minister he should have the right to appeal to a judge of the High Court. This would put the judiciary in a queer relationship with the legislature. How could a judge of the High Court decide better than the Executive Council whether a doctor had been an efficient servant? The qualitative significance of facts in the health service was a matter which only those who knew the service could judge. Supposing that a doctor appealed to the High Court judge against a decision of the Tribunal and the High Court judge decided that the man was restored to the list and then a week afterwards a child died in circumstances clearly pointing to negligence by the doctor. If a question were put in the House of Commons to the Minister of Health, the Minister's reply would be: "I did not appoint the doctor: it was the High Court judge." That would be a ridiculous situation.

Dr. MORGAN said he would have to vote against the Government or abstain from voting on this issue if it went to a Division. The aggrieved person should have the right of appealing to a higher court. He would be better to go before an experienced judge accustomed to weighing evidence. Mr. WILLINK said the issue was one of first-class importance, and there ought to be an appeal to a court of law.

The House rejected the proposed amendment by 296 to 129. It then accepted an amendment proposed by Mr. KEY which would give a doctor a right of appeal to the Minister for the removal of disqualification. On Clause 47, on the decision of disputes, the House agreed to an amendment proposed by Mr. KEY removing from the Clause provision for the appointment of a person to act on behalf of the Minister. Mr. BEVAN explained that this was in fulfilment of a promise made in committee.

HOSPITAL MANAGEMENT COMMITTEES

On the Third Schedule Mr. WILLINK moved to insert a provision that a hospital management committee should have power to co-opt not more than three persons to be members of the committee. He said that as the Bill stood these committees were entirely nominated by the Regional Hospital Board. Mr. BEVAN said he could not accept the amendment, which had already been considered in committee. The amendment was withdrawn and the committee agreed to an amendment proposed by Mr. KEY providing that no member or officer of any body or committee named in the Schedule should be debarred from being elected a member of the House of Commons. Minor amendments were made in the Fourth and Fifth Schedules and the remaining Schedules. The Report stage was thus completed and the Bill was set down to be read a third time.

Third Reading

Mr. KEY on July 26 moved the Third Reading of the National Health Service Bill. He said the fully developed services which would be provided under the Bill would give early and adequate attention to the onset of diseases, the results of accidents, and the effects of increased age. Since the Bill received a Second Reading, no major change had been made in it. Some might think that another method of distribution of practitioners was preferable to what was adopted in the Bill, but when these things had been adequately considered the will of the majority must prevail, and the duty of all was to co-operate in making the service a success. He was convinced that doctors and doctored, hospital governors and municipal councils, Ministry of Health representatives and health workers would come together to work out the details of this great service. By regional boards, management committees, and house committees, the Bill widened and extended the opportunities for voluntary service in management and control of hospital institutions. By extending to these boards and committees the power to accept gifts and hold endowments it encouraged local voluntary efforts. By guaranteeing maintenance of the institutions and provision from public funds of money for normal day-to-day expenses, it set free voluntary contributions for purposes likely to appeal to private donors. He denied that the Bill mutilated the structure of local government. He remarked that all appointments to the bodies which would

carry out the Minister's powers were to be made after consultations with the organizations concerned. In the general practitioner service only one change had been made: the Minister's control, to a negative extent, in the distribution of doctors through the Medical Practices Committee. No power of a new kind in this department had been conferred on the Minister by the Bill. His powers were of a kind which had been enjoyed for over thirty years by Ministers in relation to benefits under the National Health Insurance scheme. He denied that the Bill appropriated trust funds and benefactions in contempt of the wishes of donors and subscribers. The charge that the Bill undermined the freedom and independence of the medical profession was perversion *par excellence*. Every doctor was free to enter this service or not as he chose. If he entered he was free to take or reject patients. If he entered he was free—an astounding thing to many—to accept private patients if he wished. But if he entered the service he did so on the understanding that he accepted and observed the essential conditions of the service which he joined. Had the freedom of the medical practitioner in a municipal or voluntary hospital been undermined because he accepted a salaried appointment in the hospital concerned? No body of public or of private employees ever had the same freedom as the medical profession would have under the Bill. The chairman of the Medical Practices Committee, which was the general practitioner's real employer, must be a doctor, and six out of eight of the members must be doctors as well, five being actively engaged in practice. Misrepresentation could sink to no lower depth than to say that this undermined the freedom and independence of the profession. The case for the Bill was proved up to the hilt.

REJECTION MOVED

Mr. LINSTEAD moved that:

This House, while welcoming a comprehensive health service, declines to give a Third Reading to a Bill which discourages voluntary effort and association; mutilates the structure of local government; dangerously increases Ministerial power and patronage; appropriates trust funds and benefactions in contempt of the wishes of donors and subscribers; and undermines the freedom and independence of the medical profession to the detriment of the nation.

He said the Bill would provide a dull, uniform, unimaginative, and pedestrian health service. Lack of co-ordination would not be removed by the Bill. Half-a-dozen Government Departments would still be responsible for types of health service and local service divorced from one another. There would be health centre services where three or four authorities would meet in the same building. The Bill did not use the circumstances of local growth but uprooted the present system, gathered it into the centre, and then artificially devolved it outward. There was maximum control of the professions, with every inducement to compel medical practitioners to come into the scheme. A bribe of £66,000,000 of the taxpayers' money was being used to sweeten the Bill for the medical profession. There was excessive concentration of power and patronage in the hands of the Minister. Mr. Key had pointed out that nomination would be exercised by the Minister after consultation with appropriate organizations. But these organizations would be selected by the Minister, and their chairmen, in many cases, would be selected by the Minister alone without consultation with anybody. There would be an administrative bottleneck in Whitehall. The Bill would kill the voluntary hospitals, and would prevent people giving local voluntary service because it would amalgamate hospital committees into committees managing thousand-bed units. The Government would place hospitals under remote control by regional boards, many of them 100 miles away from some of the hospitals they administered. Provisions in the Bill would put the medical profession in chains. Prohibition of the sale of medical practice removed an honourable inducement to give increased and better service. The Bill interfered with the rights of doctors to choose their partners. It deprived a practitioner who stayed outside the scheme of access to hospital beds. It supplanted by new tribunals the professional disciplinary tribunals which had looked after the discipline of the great profession for a century. In the course of a few years a free profession would cease to exist and the country would have reached the goal welcome to Labour M.P.s—a salaried medical service.

Cmdr. MAITLAND seconded the amendment.

UTILITY MEDICINE IN UTILITY HOSPITALS

Mr. ECCLES said his father, grandfather, and great-grandfather all qualified at St. Bartholomew's Hospital and Lord Dawson of Penn had been his father-in-law. If Lord Dawson had lived two more years the House would be debating a better Bill. The essence of the controversy between the medical supporters and opponents of the Bill was the doctor's responsibility. The Bill laid down that the doctor should be responsible both to his patient and to the State. Mr. Bevan had never appreciated the consequences of his solution to this dilemma of responsibility. The Bill took away the single duty to the patient. Doctors he had known would have protested strongly against the doctrine of utility medicine in utility hospitals. Patients had confidence in a hospital because all doctors, whether general practitioners or specialists, learned their medicine under men who had imbibed the tradition of undivided responsibility of the independent doctor to his patient. The Minister recognized the value of this tradition by the treatment which he gave to the teaching hospitals.

Mr. BEVAN asked Mr. Eccles to say in what part of the Bill the Minister or any of the Boards interfered with the professional conduct of the doctor toward his patient. Mr. ECCLES replied that throughout the Bill the doctor was responsible to agencies set up by the Minister. Mr. BEVAN said Mr. Eccles was wrong.

Dr. STEPHEN TAYLOR said the real danger about the Bill was that it gave the doctors too much freedom. There was a danger that Parliament might impose a medical dictatorship. Medical efficiency was not all it should be in many parts of the country. Medical qualifications were not difficult to obtain if one had the money and could stay the course. At the bottom, one third of the medical profession was pretty low and he believed that a special form of inspection might help efficiency. The B.M.A. would cut off its nose to spite its face if it did not come in when this Bill became law.

Mr. HEATHCOTE AMORY said the Bill, throughout, seemed to regard doctors as a body of men who, given the opportunity, would abuse their positions.

Mrs. RIDEALGH asked whether the Minister would help doctors who would be in difficulties during the transitional period. She had been told there were 500 affected.

A PRACTICAL DIFFICULTY

Sir E. GRAHAM-LITTLE said there was a practical difficulty about the Bill. Good authorities estimated that if the Bill was put into operation at least three times as many doctors would be wanted as were now available. The present strength of the medical profession in practice was about 52,000. Nearly the whole of that total were now members of the B.M.A. The resolutions of that Association were surely important for the Minister to consider. All the discussions in the medical press and at meetings pointed to a great disinclination to accept service under the Bill. The doctors would not strike. That was a ludicrous suggestion. Most would say: "We do not want to work under a State service and we shall continue to work as we are now." As a member of the medical staff of a great teaching hospital he said it was wrong to suggest that the hospital system had failed to give a general service to all classes of the community, except, possibly, the middle-class. The acid test of the efficiency of a hospital was medical research. For 400 years the voluntary hospital and what was now called the municipal hospital had existed side by side, but the voluntary hospital had done the research. Mr. Willink, in his White Paper of 1944, had claimed the direction of doctors, but finally repudiated that power. It was in no way repudiated by Mr. Bevan. How many of the 50,000 active practitioners would join the service? Not more than half were likely to join the service, but the Minister needed 150,000. Various efforts had been made by the Government of Australia to introduce a State medical service, but they had uniformly failed. The N.H.I. Act of 1911 started under a handicap and had never been the success it might have been had there been greater circumspection in the approach to the profession. A greater circumspection in approach was needed now. There was no possibility of 100,000 doctors being trained in time for the appointed day under the Bill. The Dominions' offices were overwhelmed by applications from demobilized young doctors to go away from this country. To South Africa 100 of the younger doctors were emigrating, to Australia 150, and the figures for Canada and New Zealand were similar.

Sir Henry MORRIS-JONES said Mr. Bevan could not complain of an obstructive opposition to the Bill. Mr. Bevan and Mr. Key had in this Bill achieved a Socialist programme and were carrying through a great measure of nationalization. The doctors in the service became servants of the State, and for the first time people would be precluded from earning a living in places where they wished to earn it.

Mr. SOMERVILLE HASTINGS congratulated Mr. Bevan on a great Bill. It would provide, for the first time, a possibility of complete union between the preventive and the curative services. For the first time there would be a unified hospital service under the Minister. It had been noted in Committee that Mr. Bevan inclined to give more power to the hospital management committees and less to the regional hospital boards. Mr. Hastings warned him of the danger of this. The

use of beds must not be left entirely to the hospital management committees, nor should the higher appointments be so left. In statistics a uniform method of recording would be advantageous.

Dr. MORGAN said the bulk of the doctors, if they could be rid of the political prejudice from the other side, would work the Bill.

Mr. WILLINK said all parties were committed to sweeping changes in the sphere of public health. No reference had been made during the debate to the appointed day being April 1, 1948. That was at least a year, and probably two years, later than Labour M.P.s had thought a National Health Service would come into operation. But for the increased difficulties which the Minister had put upon his Department and on local authorities by his scheme, the Bill could have come into operation at least nine months earlier than it would do. He wished to bring to Mr. Bevan's attention the obscurity of the law relating to mental health as it emerged from the Bill.

It was, Mr. Willink remarked, one of the features of this Bill that mental health was brought, as it should always have been, within the sphere of the general health service, but the law with regard to mental health as it emerged from the Bill was lamentably obscure. He hoped the Minister would make rapid progress in clearing this field.

Mr. Willink said that since the Second Reading the position of the Central Health Services Council had been improved and that the individual hospital had been made a legal person with power to receive money and other property. The ridiculous remoteness of the Medical Practices Committee had been mitigated by a promise that in substance the doctors of the district would make the effective decisions on the succession to practices. The oppressive provisions of Clause 35 had been substantially improved. But the Bill still enabled extraordinary things to be done, and the Conservative Opposition objected to it because it discouraged voluntary effort and association. Every voluntary hospital was being taken over by the State and the Bill contained a provision enabling any future medical institution which might be set up to be taken over by the Minister. There was no security for any medical curative institution. Money given for the benefit of a locality or of a particular hospital would on April 2, 1948, become the property of the Minister of Health, to be put wherever he liked. The Minister would control the Hospital Endowment Fund. Local government was mutilated by removal of responsibility for any form of hospitals and by separation, on an unexplained basis, of the hospital service from the clinic service. The Minister prided himself on creating an entirely new hospital service. Was this the time for the Government to take on itself that extraordinary function? The Minister was taking power to direct the management of every place in the country where a citizen could obtain hospital care and even of the teaching hospitals. The Minister would redistribute £32,000,000 of charitable funds over England and Wales and did not even propose to bring his scheme before the House. There was no limit on what the Minister did with the money belonging to the voluntary hospitals. The Minister's unjustified insistence on a basic salary for every doctor was a first instalment of what Mr. Key had admitted to be inconsistent with people choosing the doctor they wanted. There was direct and indirect pressure in the Bill upon the medical profession to enter the service and insecurity for all who came in because of the absence of any appeal from a tribunal two-thirds lay, save to the Minister. Partnerships were threatened. Partners were no longer to be free.

THE MINISTER'S REPLY

Mr. BEVAN said he had a light task in replying. He rejoiced that the measure before the House was entirely different from the one on which Mr. Willink had laboured, which was unpalatable and unpopular. If Parliament entered into a contract with the citizens, collected from them a contribution, and in return gave a certain service, how could the contract be carried out if it was operated through an independent and self-motivating body? In regard to hospitals, Mr. Bevan asked how he could guarantee that the citizen in one part of the country would get the same service as a citizen in another part if the instrument to give that service was an independent, autonomous body. Every single instrument of the Bill must be an agent of the Minister. It was then necessary to ensure that the service did not become too centralized. Therefore the scheme provided for Regional Boards, management committees and house committees. The only voluntary part of the hospital system destroyed by the Bill was the necessity to sell flags and collect money—the indignity of having to collect money by private charity. The reason behind the bitterness of members opposite was that the Bill took away from them one of their chief sources of social and political patronage. It was notorious that first-class surgeons, gynaecologists, and general practitioners had from time to time to desert the practice of their profession in order to seduce millionaires to provide money for teaching medicine. A number of people sat in the House of Lords in consequence of their benefactions. It was established in the medical profession that one of the chief qualifications of some of the ornaments of the profession was that they were able to attract money for the hospitals from rich individuals. The only aspect of the voluntary system which the Bill destroyed was one deeply repugnant to a civilized society, that the care of its sick should be dependent on the benefactions of well-to-do persons.

Voluntary work would be more efficient in future because it would be emancipated from financial considerations. In the hospital scheme of the future the patient, instead of receiving incompetent treatment in a small hospital, was taken to another hospital where he got specialist treatment and the endowment of the local hospital followed the patient. The Opposition had put down an amendment to the Third Reading to incite the medical profession. He was astonished that the leaders of the doctors had identified themselves in a spirit of partisanship with the Conservative Party. The spokesmen of some elements of the medical profession had become the most reactionary politicians in Great Britain. He deplored the medical profession being involved in these discussions and in this controversy. The medical profession, as a whole, would work this scheme wholeheartedly. In a recent plebiscite of the medical profession they decided by a majority in favour of the abolition of the sale and purchase of practices. Why should the young doctor have to seek the assistance of a usurer before he could practise? Why should the medical profession be placed in the toils of usury on the excuse that by doing so a competitive spirit was maintained in medicine? What was wanted was not a competitive but an emulative spirit. Effectively to man the medical profession it was necessary to derive doctors from lower income groups than hitherto. Therefore it was essential to start them off in a proper fashion. In no part of the administration of the Bill had the Minister of Health, or any other authority, the slightest control over the professional conduct of the doctor. Under the scheme doctors were not State servants. They were in contract with a body over which they themselves had considerable influence. They were not in contract with the Regional Boards or with the Minister. Doctors would have more protection under the scheme than they had at present. Under the scheme they had appeals to the Tribunal. They were the most protected profession in the country. He remarked that he had no time to describe the positive merits of the Bill. The Government hoped now to leave controversy behind and to get the co-operation of the medical profession and of all health workers because without that co-operation the scheme was bound to fail. "Now that we are reaching the conclusion let us hope that the echoes of controversy will die down, and that what will reach our ears will not be the declamations of partisans but the whispers and piteous appeals of sick people all over the country, of the weak and distressed who are reaching out their hands to this House of Commons to give them succour and assistance in their difficulties. I believe that eventually it is that small voice that will be heard and will be the most influential and not the raucous declamations of controversialism."

The amendment proposed by Mr. Linstead was then rejected by 261 to 113 and the Bill was read a third time.

Need for Sanatoria

Dr. SEGAL asked on July 18 whether Mr. Bevan knew of the increasing shortage of sanatorium accommodation, and whether he would take joint action with the responsible authorities to retain some of the existing E.M.S. hospitals for conversion into sanatoria.

Mr. BEVAN replied that the crucial factor was not shortage of accommodation but the dearth of nurses and other hospital workers, which precluded the staffing of sufficient additional beds. Every effort was being made to remedy this.

Inspectors for Experiments on Animals.—Asked on July 11 about the appointment of inspectors for investigating experiments by vivisection, Mr. EDE said he would be glad to consider candidates with veterinary qualifications, but medical qualifications were essential in an inspector, and it was rare to find a candidate qualified in both professions. Concerning the recent case at Oxford—which, he believed was still *sub judice*—the premises had been visited the previous month by a Home Office inspector before the outbreak of distemper which was mentioned in the proceedings.

Notes in Brief

Work in connexion with accommodation and amenities for domestic staffs of hospitals has not been singled out for a particular priority. As in other classes of case, priority may be granted where the work is of particular urgency, and licences may also be given for less urgent work that can be undertaken with labour and materials not required for priority work.

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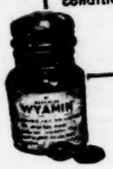

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The Ministry of Health Standing Committee on Medical and Nutritional Problems includes the following. *Ministry of Health.*—Sir Wilson Jameson, Dr. W. A. Lethem, Dr. H. E. Magee, Dr. D. M. Taylor. *Ministry of Food.*—Lord Horder. *Ministry of Education.*—Dr. J. Alison Glover. *Medical Research Council.*—Sir Edward Mellanby, Prof. S. J. Cowell, Dr. B. S. Platt. *Department of Health for Scotland.*—Sir Andrew Davidson. *Ministry of Fuel and Power.*—Dr. S. W. Fisher. *Ministry of Labour and National Service.*—Dr. E. R. A. Merewether.

The Pneumoconiosis Research Unit of the Medical Research Council has opened a clinic at the hospital at Llandough for the study of certified cases to determine the possibilities of direct treatment. Similar investigations are being made among tin miners in Cornwall, including the possibilities of treatment by the inhalation of finely powdered aluminium. A clinical study of working miners at selected mines in South Wales, in relation to dust and other environmental conditions, is about to start.

According to returns from the local authorities concerned, 66% of the child population up to age 15 were immunized against diphtheria in Manchester at Dec. 31, 1945, 49% in Ashton-under-Lyne, and 52% in Oldham.

Except where considerations of health or safety make such a course undesirable all paraplegic pensioners will, in future, be eligible for the supply and repair of a motor invalid tricycle at State expense.

The Services

Major-Gen. J. C. A. Dowse, C.B., C.B.E., M.C., late R.A.M.C., has been appointed Honorary Physician to the King in succession to Col. (Temp. Brig.) H. A. Sandiford, M.C., late R.A.M.C., retired, and Major-Gen. E. A. Sutton, C.B.E., M.C., late R.A.M.C., has been appointed Honorary Surgeon to the King in succession to Major-Gen. G. A. Blake, C.B., late R.A.M.C., retired.

Surg. Cmdr. H. L. Cleave, R.N., has been appointed O.B.E. (Military Division) and Surg. Lieut.-Cmdr. J. C. Wyatt, R.N., and Surg. Lieut. C. A. Jackson, R.N.V.R., have been appointed M.B.E. (Military Division) for outstanding services while prisoners of war in the Far East.

Surg. Cmdr. V. F. Walsh R.N., and Temp. Surg. Lieut. D. R. Syred, R.N.V.R., have been mentioned in dispatches, and Surg. Lieut.-Cmdr. D. N. Ryalls, R.N.V.R., has been mentioned in dispatches posthumously for good services while prisoners of war in the Far East.

Majors S. M. Banfill, J. N. B. Crawford, and J. A. G. Reid, R.C.A.M.C., have been appointed M.B.E. (Military Division), and Major G. C. Gray, R.C.A.M.C., has been mentioned in dispatches, in recognition of gallant and distinguished services while prisoners of war in the Far East.

Capt. C. T. Robertson, R.C.A.M.C., has been appointed M.B.E. (Military Division) in recognition of gallant and distinguished services while a prisoner of war.

Medical News

Arrangements have been made to hold the next congress of the International Surgical Society in London from Sept. 14 to 20, 1947. The president will be Dr. Leopold Mayer of Brussels, and the general secretary of the society is Dr. L. Dejardin of Brussels. An interesting programme is being prepared. Local arrangements will be in the hands of a British committee of which Prof. G. Grey Turner is chairman, and Mr. H. W. S. Wright (9, Weymouth Street, Portland Place, W.1) the honorary secretary.

On the recommendation of the honorary managing committee of the Bureau of Hygiene and Tropical Diseases, the Secretary of State for the Colonies has confirmed the appointment of Dr. Charles Wilcocks as director of the Bureau with effect from April 1, 1946, and has appointed Dr. H. J. O'D. Burke-Gaffney to be assistant director with effect from July 16, 1946. Dr. J. F. Corson, who, since July, 1943, had given his help as acting assistant director of the Bureau, retired on June 30.

The Fellowships offered by the Commonwealth Fund of New York to British graduates for tenure in American universities have now been resumed after interruption by the war. The committee of award have made the following appointments in medicine for 1946–7: A. H. Cruickshank, M.D., to Johns Hopkins University; A. M. M. Kelvie, M.B., Ch.B., to the Mayo Clinic.

A site is being sought in London by the Save the Children Fund for a memorial to children of all countries who lost their lives during the war.

Sir Comyns Berkeley, F.R.C.P., F.R.C.S., F.R.C.O.G., who died on Jan. 27, left £123,659, the residue of which goes to Gonville and Caius College, Cambridge, for the provision of medical fellowships.

Universities and Colleges

UNIVERSITY OF LONDON

Westminster Hospital Medical School

Lord Woolton will deliver the Inaugural Address at the opening of the new academic session in the Sir Edward Meyerstein Lecture Theatre of the School on Monday, Oct. 7, at 3 p.m.

An entrance scholarship examination in anatomy and physiology will be held on Sept. 11 and 12. Applications for further particulars must reach the secretary, Westminster Hospital Medical School, 17, Horseferry Road, S.W.1, by Aug. 16.

The following candidates have been approved at the examination indicated:

ACADEMIC POSTGRADUATE DIPLOMA IN MEDICAL RADIOLOGY.—P. H. Beamish, F. G. Callus, M. C. Conne'l, M. A. Egan, M. A. FitzGerald, E. H. Hanson, I. L. McKelvie, M. Mandelstam, Gwenllian B. Morgan, B. Navid, J. F. Nicholl, E. J. Richardson, W. V. Taylor, B. C. H. Ward. *Part I:* L. Charney, M. G. E. Shakankiri, K. N. Tankariwala.

UNIVERSITY OF BIRMINGHAM

The following appointments to full-time Clinical Chairs of Medicine, Surgery, Obstetrics and Gynaecology, and Paediatrics and Child Health are announced:

Chair of Medicine: W. M. Arnott, M.D., F.R.C.P.Ed. *Chair of Surgery:* F. A. R. Stammers, C.B.E., F.R.C.S. *Chair of Obstetrics and Gynaecology:* Hilda N. Lloyd, F.R.C.S., F.R.C.O.G. *Chair of Paediatrics and Child Health:* J. M. Smellie, M.D., F.R.C.P.

UNIVERSITY OF EDINBURGH

At a Graduation Ceremonial held on July 24 the following medical degrees and diplomas were conferred:

M.D.—[1]A. El Shahed, [2]J. Innes, [3]R. J. G. Rattrie, [13]J. S. Robson, D. C. Ross, [13]I. D. Willatt.

CH.M.—I. S. Smillie (gold medal), R. Strang.

M.B., CH.B.—Grace Barker, Patricia M. Barraclough, Elizabeth L. Batchelor, Margaret R. Bate, F. A. Beale, Fiona M. Bennett, H. L. Binnie, W. L. Blackett, W. J. O. Box, [4]Mary M. M. Boyd, E. R. Brooks, J. R. Brotherton, J. Brown, Pamela J. Brown (*née* Rickword), S. P. Bruce, Mary C. Buchanan, Katharine A. Burn-Murdoch, J. Burton, A. Cameron, W. W. Campbell, I. W. Clark, [4]Barbara E. Clayton, D. C. Cockburn, Iole L'E. K. de Lingen, A. C. Douglas, D. Duncan, J. A. Ewing, R. M. Foster, A. D. B. Fotheringham, R. Frater, E. N. S. Fry, K. G. Gadd, W. R. Galloway, Constance A. Gibbs (*née* Mitchell), R. A. F. Gilbert, J. M. Gill, R. Gillott, Philippa A. Glyn, A. Goldberg, R. H. Gosling, Jessie E. J. Grainger, E. R. Gunn, Sheila I. Haldane, K. C. R. Halliday, T. L. Henderson, J. S. Holden, R. Houston, Moira B. Hughes, Elizabeth S. Humble, R. C. Humphreys, Morag L. Insley (*née* Henderson), A. S. Ireland, G. Irvine, A. B. Jamieson, D. A. Ll. Jones, J. D. Kerr, Alison B. King, Isabella Kingan, Charlotte M. M. Kirkcaldie, I. C. S. Knight, R. R. Lam, S. G. E. Laverty, Rosemary W. Lawrence, Isabel J. K. Ledger, Mary K. Lethem, I. C. Lewis, K. A. Lim, P. D. Livingstone, Helenor F. Lochhead, [4]J. A. Loraine, Ethel M. J. Loudon, A. C. M'Dougall, Margaret M. MacDougall, W. A. Macdougall, P. C. MacGillivray, R. C. MacGillivray, D. M. MacKay, I. G. MacKenzie, D. L. MacKinnon, J. MacLean, A. M'Nab, R. C. Macnair, Betty Mallace, Dilys Manners, T. S. Martin, K. W. Matheson, Katherine-Alice Mercer, J. D. C. Millar, F. R. D. Minett, R. R. W. Mirrey, Irene M. J. Monaghan, Isobel S. Mowat, Elspeth M. Orr, O. E. Owen, J. R. Page, H. M. Park, F. L. Rawson, A. Reid, D. Reid, Myrtle V. Richards, B. Ruebner, [4]W. R. St. Clair, Kathleen I. Scott, Anne K. I. Sellers, W. L. Sewell, Helen M. Shearer (*née* Lenman), C. G. Sim, D. A. Sime, D. C. Simpson, K. Sinclair, G. M. M. Smibert, L. S. Smith, I. F. Sommerville, A. R. Somner, J. O. Taubman, Emily D. J. Todd, C. H. M. Walker, C. H. Wheatley, [4]Rachel B. White, J. W. Whittick, A. J. Williams, C. E. Williams, A. T. Wilson, J. T. Wright, D. Yuille, Monica M. Zealley.

B.Sc. (Department of Pure Science)—Mary C. Buchanan, M.B., Ch.B.

DIPLOMA IN PSYCHIATRY.—[1]J. B. Methven.

DIPLOMA IN TROPICAL MEDICINE AND HYGIENE.—W. Bain, [1]J. A. P. Bouton, [1]G. Buchanan, C. W. F. MacKay, J. P. Mehrotra, K. D. Moynagh, [1]W. O. Petrie, J. M. Smith.

POLISH SCHOOL OF MEDICINE AT EDINBURGH

M.D.—K. Durkacz, L. Kulczycki, Magdalena K. Munk, R. Rejthar, O. Rymaszewski, T. J. Szczesniak, H. Wójcicki.

M.B., CH.B.—A. Bobak, W. Galecki, K. Getta, Z. Giedrys, E. Grubsztejn, W. Kaczmarek, A. Kurowski, [1]T. Labęcki, Z. Liskowicz, Z. Milewski, Liwia Mitis, [1]K. Sztabert, L. Wachala, A. Wloczewski.

The following scholarships, bursaries, prizes, etc., were awarded in the Faculty of Medicine: *Cameron Prize in Practical Therapeutics:* A. Szent-Györgyi, M.D., Ph.D., professor of medical and organic chemistry in the University of Szeged, Hungary, in recognition of his distinguished contributions to the knowledge of vitamin C. *Ettles Scholarship and Leslie Medal* and *Scottish Association for Medical Education of Women Prize:* Rachel B. White. *Chiene Medal in Surgery:* I. S. Smillie. *Mouat Scholarship in the Practice of Physics, Royal Victoria Hospital Tuberculosis Trust Medal,* and *Thomson Memorial Medal in Child Life and Health:* J. A. Loraine. *Stark Scholarship in Clinical Medicine:* R. F. Robertson. *Buchanan Scholarship in Midwifery and Gynaecology:* Mary M. M. Boyd. *James Scott Scholarship in Midwifery and Gynaecology:* R. C. MacGillivray. *Vans Dunlop Scholarship in Materia Medica and Medicine:* J. A. Loraine.—*Prox. acc.:* R. F. Robertson. *Vans Dunlop Scholarship in Pathology and Surgery:* H. A. F. Dudley. *Dorothy Gilhllan Memorial Prize, Annandale Medal in Clinical Surgery,* and *Lawson Gifford Prize in Obstetrics and Gynaecology:* Barbara E. Clayton. *Beaney Prize in Anatomy and Surgery:* W. R. St. Clair.—*Prox. acc.:* Barbara E. Clayton. *Keith Memorial Prize in Systemic Surgery* and *Pattison Prize in Clinical Surgery:* I. F. Sommerville. *Murdoch Brown Medal in Clinical Medicine:* A. C. M'Dougall. *Wightman Prize in Clinical Medicine:* A. C. Douglas. *Maclagan Prize in Forensic Medicine:* Eileen V. M'William. *Stirton Bursary:* Margaret Stirling. *Colonel Thomas Biggam Memorial Medal and Prize in Pathology:* Rosemary H. M. Davie. *Lewis Cameron Undergraduate Prize in Bacteriology:* D. S. M'Laren. *Cunningham Memorial Medal and Prize in Anatomy* and *Senior John Aitken Carlyle Bursary in Anatomy and Physiology:* W. F. Coulson. *Junior John Aitken Carlyle Bursary*

in Anatomy and Chemistry: M. R. King. *Mackenzie Bursaries in Anatomy:* Jean M. Arkieson, M. R. King, G. F. M. Russell, A. W. M'I. Smith. *Ian Oswald Prizes in Anatomy:* Margaret Kennedy, R. Kilpatrick. *Whiteside Bruce Bursary:* Anne T. Lambie and G. F. M. Russell (equal). *Vans Dunlop Prizes in (a) Botany and Zoology and (b) Physics and Chemistry:* Anne T. Lambie.

[1] *In absentia.* [2] Highly commended for thesis. [3] Commended for thesis. [4] With honours.

UNIVERSITY OF GLASGOW

The King has approved the appointment of Robert Aim Lennie, M.D., F.R.F.P.S., F.R.C.O.G., senior obstetric surgeon in the Glasgow Royal Maternity and Women's Hospital and gynaecologist at the Victoria Infirmary, Glasgow, to the Regius Chair of Midwifery in the University of Glasgow.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH

At a quarterly meeting of the College, held on July 16, the President, Dr. D. M. Lyon, intimated that the following had accepted the Honorary Fellowship of the College:

Major-Gen. Sir Alexander Gordon Biggam, K.B.E., C.B., M.D.Ed., F.R.C.P.Lond., Sir Henry Hallett Dale, O.M., G.B.E., M.D.Camb., F.R.S., F.R.C.P.Lond., Neil Hamilton Fairley, C.B.E., M.D.Melb., F.R.S., F.R.C.P.Lond., Sir Alexander Fleming, M.B.Lond., F.R.S., F.R.C.P.Lond., Sir John Fraser, Bt., K.C.V.O., *M.C.*, M.D., F.R.C.S.Ed., The Rt. Hon. Lord Moran, *M.C.*, M.D.Lond., P.R.C.P.Lond., Major-Gen. Sir Percy Stanley Tomlinson, K.B.E., C.B., D.S.O., F.R.C.P.Lond.

Dr. Ronald Haxton Girdwood (Edinburgh), Dr. Angus Henry Campbell (Redhill), and Dr. Stanley Galbraith Graham (Glasgow) were introduced and took their seats as Fellows of the College.

Major William Happer, I.M.S., Drs. Robert James Kellar, M.B.E. (Edinburgh), Gordon Douglas Malcolm (Bridge of Earn), and Sir Andrew Davidson (Edinburgh) were elected Fellows of the College.

SCOTTISH CONJOINT BOARD

The following candidates, having passed the final Examinations, have been granted the diploma of L.R.C.P.Ed., L.R.C.S.Ed., L.R.F.P.&S.Glasg.:

E. A. Barrett, W. R. Brown, W. S. Brown, Mary G. Buchanan, J. Duncan, A. S. Dunn, Margaret W. Gerrard, R. F. Gray, I. Lamond, G. A. Lawrenson, Julia I. Leitch, G. C. Mackie, Catherine H. Mair, H. M. Mann, Jeannette B. Morrison, N. A. Oppenheim, A. C. Pole, J. L. Quartey-VanderPuije, J. N. Rankin, B. W. T. Richardson, H. K. Rose, Agnes W. M. Scott, Kirsty F. Semple, W. P. Thomson, J. Watson, A. J. Williams.

EPIDEMIOLOGICAL NOTES

Discussion of Table

In *England and Wales* there was a general fall in the incidence of infectious diseases, and notably of measles 543, scarlet fever 152, acute pneumonia 62, and dysentery 26. The only disease with an increased incidence was whooping-cough 23.

The fall in measles was most marked in Essex 168, London 167, Surrey 87, Middlesex 86, and Kent 82. A small general decline in scarlet fever occurred throughout the country. The largest local variations in whooping-cough were a fall of 67 in Yorkshire West Riding and a rise of 49 in Lancashire. Notifications of diphtheria were 13 fewer than in the preceding week; the largest changes were a decrease of 14 in Cheshire and a rise of 11 in Essex. Only 61 cases of dysentery were notified—the smallest weekly total for almost four years; Surrey had 11 and London 10 cases.

A further case of acute poliomyelitis, making 6 in all, has been reported from the Potters Bar area of Middlesex. At Woolacombe, North Devon, 16 cases of paratyphoid have been notified in the past few weeks.

In *Scotland* the notifications of infectious diseases decreased. There were falls in measles 77, scarlet fever 39, acute primary pneumonia 28, dysentery 25, diphtheria 22, and cerebrospinal fever 13. The fall in measles was in the western area, while in Edinburgh the cases increased from 133 to 165.

In *Eire* little change occurred in the incidence of notifiable diseases. Enteritis and diarrhoea rose by 8 to a total of 64, of which 58 were notified in Dublin C.B.

In *Northern Ireland* ice-cream caused an outbreak of 9 cases of diphtheria, of a virulent type, in Derry.

Week Ending July 20

The notifications of infectious diseases during the week in England and Wales included: scarlet fever 936, whooping-cough 2,474, diphtheria 247, measles 3,783, acute pneumonia 380, cerebrospinal fever 49, dysentery 60, acute poliomyelitis 10, paratyphoid 20, typhoid 6.

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INFECTIOUS DISEASES AND VITAL STATISTICS

We print below a summary of Infectious Diseases and Vital Statistics in the British Isles during the week ended July 13.

Figures of Principal Notifiable Diseases for the week and those for the corresponding week last year, for: (a) England and Wales (London included). (b) London (administrative county). (c) Scotland. (d) Eire. (e) Northern Ireland.

Figures of Births and Deaths, and of Deaths recorded under each infectious disease, are for: (a) The 126 great towns in England and Wales (including London). (b) London (administrative county). (c) The 16 principal towns in Scotland. (d) The 13 principal towns in Eire. (e) The 10 principal towns in Northern Ireland.

A dash — denotes no cases; a blank space denotes disease not notifiable or no return available.

Disease	1946					1945 (Corresponding Week)				
	(a)	(b)	(c)	(d)	(e)	(a)	(b)	(c)	(d)	(e)
Cerebrospinal fever	33	4	17	—	1	52	4	20	—	5
Deaths		—	1				—	2		
Diphtheria	277	30	71	34	15	422	24	86	71	5
Deaths	2	—	1	—	—	7	—	1	—	—
Dysentery	61	10	23	—	—	206	47	47	1	—
Deaths				—	—				—	—
Encephalitis lethargica, acute	5	—	—	—	—	4	—	—	—	—
Deaths		—					—			
Erysipelas			30	3	1			30	4	3
Deaths		—					—			
Infective enteritis or diarrhoea under 2 years				64					68	
Deaths	39	4	9	12	3	34	3	4	14	1
Measles*	3,981	630	267	54	5	4,075	207	46	33	—
Deaths	2	—	—	—	—	3	—	2	—	—
Ophthalmia neonatorum	69	2	11	—	—	51	4	8	—	—
Deaths										
Paratyphoid fever	17	—	1 (B)	1 (B)	—	9	—	2 (B)	—	—
Deaths	1	—	—	—	—	—	—	—	—	—
Pneumonia, influenzal	416	29	4	1	1	387	23	9	5	3
Deaths (from influenza)†	5	1	1	1	—	8	2	—	—	—
Pneumonia, primary			127	12				131	14	
Deaths		26		9	6		17		10	5
Polio-encephalitis, acute	—	—				1	—			
Deaths		—					—			
Poliomyelitis, acute	12	—	—	4	—	12	4	1	2	—
Deaths		—					—			
Puerperal fever		—	15		—		4	8		—
Deaths										
Puerperal pyrexia‡	149	9	6	—	1	123	4	13	—	—
Deaths		—					—			
Relapsing fever	—	—			—	1	—			—
Deaths										
Scarlet fever	845	72	112	21	23	1,303	74	153	21	37
Deaths	—	—	—	—	—	1	—	—	—	1
Smallpox	—	—	—	—	—	—	—	—	—	—
Deaths				—	—				—	—
Typhoid fever	6	—	5	6	—	10	2	2	5	1
Deaths	1	—	—	—	—	1	—	—	—	—
Typhus fever	—	—	—	—	—	—	—	1	—	—
Deaths				—	—				—	—
Whooping-cough*	2,270	148	28	36	14	1,098	69	14	51	8
Deaths	12	2	2	—	—	4	—	—	—	—
Deaths (0–1 year)	334	52	56	35	10	286	23	28	29	11
Infant mortality rate (per 1,000 live births)										
Deaths (excluding still-births)	4,003	604	514	181	103	3,815	561	482	197	92
Annual death rate (per 1,000 persons living)			11·3	11·6				10·9	12·7	
Live births	8,546	1,316	987	338	228	6,892	792	822	426	205
Annual rate per 1,000 persons living			19·9	21·7				16·4	27·5	
Stillbirths	215	18	37			203	21	15		
Rate per 1,000 total births (including stillborn)			36					18		

* Measles and whooping-cough are not notifiable in Scotland, and the returns are therefore an approximation only.

† Includes primary form for England and Wales, London (administrative county), and Northern Ireland.

‡ Includes puerperal fever for England and Wales and Eire.

Letters, Notes, and Answers

All communications with regard to editorial business should be addressed to THE EDITOR, BRITISH MEDICAL JOURNAL, B.M.A. HOUSE, TAVISTOCK SQUARE, LONDON, W.C.1. TELEPHONE: EUSTON 2111. TELEGRAMS: *Aitiology Westcent, London.* ORIGINAL ARTICLES AND LETTERS forwarded for publication are understood to be offered to the *British Medical Journal* alone unless the contrary be stated.

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B.M.A. SCOTTISH OFFICE: 7, Drumsheugh Gardens, Edinburgh.

ANY QUESTIONS?

Treatment of Amenorrhoea

Q.—*A healthy woman aged 24 has had amenorrhoea since the birth of her first baby in May, 1945. Delivery was normal, but low forceps were applied late in the second stage. Breast-feeding was continued for ten months. Post-natal examination revealed a rather small anteverted uterus. Chest skiagrams are normal; the urine contains no sugar or albumin. What causes the amenorrhoea? What is the appropriate oestrogen therapy, with dosage; and what are its rationale and the chances of success?*

A.—Although longer than average, the period of amenorrhoea cannot yet be regarded as outside the physiological limits—particularly as lactation was rather protracted. There is something to be said for waiting a little longer before resorting to hormone therapy, although general measures—tonics, open-air life, and vitamin E—might be tried. If menstruation does not recommence in the near future complete investigation is indicated, but the cause is most likely to be a failure of gonadotrophic function of the pituitary following pregnancy and lactation. In the past this sort of case was diagnosed as superinvolution of the uterus, the implication being that the fault was in the uterus itself. It is now recognized that the uterine atrophy is only secondary to failure of ovarian function, which in turn is due to a pituitary fault.

Oestrogens act on the uterus, and by their use it should be possible to restore it to its normal size and possibly initiate "withdrawal haemorrhage." A suitable dose would be hexoestrol 1.0 mg., or dienoestrol 0.3 mg., thrice daily by mouth for three weeks followed by an interval of two weeks. Two or three courses may be given, but not more. Any effect is likely to be temporary, and the uterus will atrophy again when treatment is suspended. However, there is a chance that if the endocrine cycle is merely in a state of "suspended animation" the oestrogen therapy may be enough to reawaken it to permanent activity. If it does not, the appropriate treatment is with gonadotrophin, but even this is only replacement therapy at a higher level.

Varicose Ulcers

Q.—*What is the treatment of varicose ulcers? Has penicillin been tried, and with what success?*

A.—Varicose ulcers are essentially stagnation phenomena due to incompetence of the valves in the superficial veins of the lower limbs. They are commonest in the lower third of the leg: on the inner side of the limb when the internal saphenous vein is involved, and on the outer side when the external saphenous vein is affected. In treatment one must recognize the importance of this gravitational reflux, and, although ulcers and the surroundings may become infected, this is usually of secondary importance. Healing may be obtained by many methods which overcome this gravitational reflux of blood. Absolute rest in bed with the limb elevated will invariably secure rapid healing in the absence of serious bone involvement, and almost irrespective of the nature of the local applications. Recurrence, however, is likely unless the incompetent veins are either controlled by elastic stockings or obliterated by means of injections or operation. In some cases healing may be obtained by one of the various types of compression bandage, but this is not likely to be permanent, unless the veins are subsequently controlled by one of the foregoing methods. If permanent healing is to be secured in cases of long-standing ulceration, with a good pigmented scar free from tenderness and oedema, then almost all cases must be submitted to operation, as incompetent thigh veins are invariably present. Since the role of infection in varicose ulcers is relatively unimportant, it would appear on *a priori* grounds that penicillin or chemotherapy is likely to be of little use, and this is borne out by clinical experience. These may reduce infection but will not cure varicose ulcers. On the other hand, if the gravitational factor is overcome the ulcers will heal almost irrespective of the local application.

Dengue and Sandfly Fevers

Q.—*What is the aetiology of the sandfly and dengue group of fevers, and what is their relation to the so-called "short-term" and "long-term" fevers common in tropical and subtropical zones?*

A.—Although having features in common, sandfly and dengue fevers appear from cross-immunity tests to be due to separate and distinct viruses. "Short-term" and "long-term" fevers obviously include a group of ill-defined conditions, and it is therefore possible that an individual example, especially of the former, may be one of sandfly or dengue fever.

Raisins for Enuresis

Q.—*A handful of raisins at bedtime for nocturnal enuresis has, in my experience, worked well. Is there any scientific basis for this?*

A.—There appears to be no scientific basis for the use of raisins to cure nocturnal enuresis.

Chyluria Tropica

Q.—*A patient aged 27 has occasional brief chyluria following a two-year tour in West Africa. What is the prognosis? What are the chances of his developing elephantiasis of legs or scrotum?*

A.—Repeated or persistent attacks of severe chyluria may lead to debility, while the overt nature of chyluria may give rise to depression or an anxiety state. Secondary features, such as bleeding, urinary obstruction from coagula, and infection of the urinary tract, may also complicate the prognosis of chyluria. Transient or mild attacks, however, need not influence life or in themselves worsen the prognosis of filariasis, nor is chyluria especially associated with the development of elephantiasis of the legs or scrotum.

Glandular Fever

Q.—*A man of 30 had glandular fever a year ago in the Middle East, and has since had recurrences at intervals of three or four months. What are the prognosis and treatment?*

A.—Recurrences of glandular fever are extremely unusual, although a few instances have been reported. Nevertheless the diagnosis must be questioned if the haematological and serological changes are not characteristic. In the absence of clinical data it is not possible to suggest an alternative diagnosis, but other causes of recurrent lymphadenitis must be sought, and excision of an enlarged lymph node for histological examination considered. If the diagnosis of glandular fever is unassailable the ultimate prognosis is good. There is no specific treatment; but if the same group of lymph nodes is affected in each attack radiotherapy might be given a trial. It has proved effective in certain indolent cases (Kahlstorf, A., *Strahlentherapie*, 1935, **54**, 459).

Malaria Prevention

Q.—*In which districts of North Africa is malaria rife? What is the most recent preventive medicinal measure, and the dosage?*

A.—Malaria occurs throughout North Africa. Control measures have greatly reduced the incidence in densely populated areas, but villages, if near permanent water collections, are liable to endemic malaria, or to epidemic malaria when climatic conditions are favourable. The disease tends to be seasonal, being absent or rare in the dry season

and showing its highest incidence in years of heavy rain. The best preventive medicinal measure available is mepacrine, 100 mg. daily, to be continued for two months subsequent to the last possible exposure to infection. This treatment causes yellow staining of the skin. Paludrine, which in field trials has proved to be more valuable, is not yet available. When obtainable the dose will probably be 100 mg. once or twice *weekly*.

Foreign Body in Stomach

Q.—*A child of 3 swallowed a Kirby grip, and a radiograph shows it lying in the stomach. Is operation indicated?*

A.—There is no need for operation so long as the grip is causing no symptoms. In time it should pass through the pylorus and travel along the rest of the alimentary tract. There is no fixed time for the safe residence of a foreign body in the stomach, and the surgeon must be guided by the likelihood of its causing symptoms. If attacks of pain, possibly due to the presence of the grip, should occur, then it would be wise to explore the abdomen, but a skiagram to determine the exact position of the foreign body should be taken immediately before the exploration.

INCOME TAX

Premiums for Sickness Insurances

N. M. asks whether premiums for sickness insurance can be treated as expenses or relief obtained in any other way.

*** The answer is in the negative; but sums *received* from such policies are not regarded as liable to income tax, unless they are receivable for such a long period as to become taxable as "annual payments."

Car Expenses

H. W. runs two cars and has deducted for income tax purposes one half of the whole running expenses. No replacement cost or depreciation has been claimed.

*** Unless the agreement with the local Revenue office was that one-half of the running costs would cover *all* the allowances due, there seems to have been no reason why in the past H. W. should not have deducted either one-half the full depreciation allowance or one-half actual replacement costs. (The "initial" allowance was not then in existence.) We advise him to lodge a claim for one-half the depreciation—calculated on both cars—for the past six years, or for such shorter period as may be justified by the facts. When the cars are sold a "balancing allowance" or a "balancing charge" will be applicable according to whether the sale price is less than or exceeds the cost price of the particular car less the aggregate depreciation allowances on that car. The cars will have to be dealt with separately, but if sold in the same year only the net amount will affect the liability.

Assistant: Car Expenses

W. E. is entitled to deduct his car expenses from his salary as an assistant in general practice. In February, 1946, he sold his car for £350 and bought another for £600. Can he claim the cost of replacement (£600−£350=£250) as an expense?

*** It is assumed that W. E. has not had depreciation allowances in respect of the old car. On that assumption the answer is, Yes—as an expense of the year 1945–6. If the new car represents an improvement on the old car (in the condition it was in when acquired), that part of the £600 attributable to improvement is a capital expense and is not deductible. We suggest, however, that in the long run it may be preferable to claim the usual allowances instead of the cost of replacement. On that basis no allowance would be due for 1945–6, but for 1946–7 W. E. can claim an initial allowance—i.e., 20% of £600=£120 and depreciation allowance—i.e., 25% of £600=£150, total £270. The depreciation allowance will be claimable for future years at the rate of 25% on the written-down value.

First Year in Partnership

P. J. will be acting as locum tenent up to Sept. 30, 1946, as from which date he will go into partnership. Car expenses will be borne by the individual partners. He is informed that from Oct. 1, 1946, to Sept. 30, 1947, he will be assessed on the current earnings for *his personal income tax return*. If so can the balance of the 20% initial allowance and the 25% depreciation allowance on a car bought in August, 1945, be allowed in his 1945–6 assessment?

*** Partnerships are dealt with as units for income tax assessment purposes. If P. J. is to be assessed for the year to Sept. 30, 1947, on the current year's basis it is presumably because the new firm has elected to be so assessed—which is not usual when the previous year's basis would carry a charge for the salary of an assistant or locum tenent. The "depreciation" allowance can be spread over the year, but we are doubtful whether that would apply to the new "initial allowance." If, however, it is wholly set against the earnings for the six months to Sept. 30, 1946, the result is apparently the same over the whole financial year 1946–7. The cost of buying instruments can be allowed, but only as regards replacements; new requisitions represent an outlay of capital.

LETTERS, NOTES, ETC.

Protein Hydrolysate for Peptic Ulcer

Dr. D. MCANALLY (Herts Pharmaceuticals, Ltd.) writes: I should like to make one or two comments on the answer (July 6, p. 37) to the question "Is protein hydrolysate useful in the treatment of selected cases of duodenal ulcer?" In the first place, this whole question is still *sub judice*; it is now being thoroughly investigated in this country, with controls, and the results of the investigation will probably be available in six months' to one year's time. I have personal knowledge of cases of peptic ulcer which have done extremely well on oral protein hydrolysates, but I should be the first to agree that carefully controlled clinical trial in this very important question is necessary. At the moment we simply do not know whether protein digestion is impaired in duodenal ulcer or not. From my own evidence, the most common and successful uses of oral protein hydrolysates are in peptic ulcer and convalescence, but the clearest clinical indication for their use is in those relatively few conditions where protein digestion is impaired—e.g., some cases of pancreatic disease. In the case of peptic ulcer it must be remembered that amino acids are amphoteric and therefore have considerable buffering power against gastric acidity, and also they supply an immediately available source of nitrogen to help in the healing of the ulcer. This, to my mind, is very important, as the diet of peptic ulcer patients is sometimes deficient in nitrogen, and healing of any ulcer is not to be expected under these circumstances. Where the power of absorption is impaired, giving amino acids will obviously not help, but where the ingestion or digestion of proteins is deficient, then oral protein hydrolysate therapy may very well be of benefit.

Intravenous Technique

Dr. D. S. JONES (Llanelly) writes: May I draw attention to two factors concerning intravenous technique? First, can the manufacturers provide more syringes with peripheral and fewer with central nozzles? Practically all manœuvres can be carried out equally well with the former as with the latter. On the other hand, it is essential for a perfect intravenous technique to have a peripheral nozzle. Furthermore, local infiltration is facilitated by the use of this type of syringe. Secondly, I make a plea for the adoption of the smaller hypodermic No. 24 s.w.g. needles for intravenous work, the advantages being that it is easier to puncture a vein, haematomata are rare, it is less painful for the patient, and an invisible vein can be sought with the minimum of trauma. An additional advantage of the small needle is that the injection must be made at a moderately slow rate, which is a "safety valve" in certain cases—e.g., pentothal and uroselectan.

Effects of Sweets on Teeth

Dr. ALEXANDER LIVINGSTON, L.D.S. (Southampton), writes: With further reference to Dr. H. E. Magee's Milroy lecture, and Miss Dorothy M. Richardson's note (June 29, p. 1010): for some four years, 1936–9 (when chocolate became unobtainable in quantity), I always ate chocolate before going to sleep, that is, in bed, and left a little undissolved against my pendant right upper molars. By 1940 the third molar had developed a cheek-surface cavity, and was extracted as unsavable. Three weeks ago the second molar broke down while eating bread-and-butter, with crust admittedly. It, too, is doomed to extraction; it is a typical, slowly progressing, and absolutely "hollow" tooth.

A Possible Sanatorium

Dr. E. VIPONT BROWN (Carnforth) writes: After many years I have at last heard from a dear friend of mine, Dr. Mitterstiller, Hotting, Sonnerstr., 4, Innsbruck. In his letter he says: "In the neighbourhood of Innsbruck, about 1,400 m. high up in the mountains, there has been erected a large building for training the soldiers in skiing. Naturally it is not finished and practically ownerless. The place would be suitable for a sanatorium like that of Rollier's in Leysin in Switzerland. Do you think that an association of medical men in England would be interested in erecting there such a sanatorium for surgical tuberculosis?" I am now far too old (83) to take any active interest in such a scheme, but I thought it might be well to publish the suggestion in your columns. Some who are acquainted with the glorious mountains round Innsbruck may feel attracted to the idea.

Health Service Bill

Dr. J. A. Balck-Foote (Andover) writes: I regret that in my letter (July 27, p. 138) I used the word "affected" in para. 1 twice, leading to possible misunderstanding. On the second occasion it should be replaced by "weakened."